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ABSTRACT

This document is a collection of 12 issues of a monthly publication on pubic policy and postsecondary education opportunity. Each issue contains one or two main articles providing an analysis of research on trends in postsecondary education. The major articles in these issues are: (1) "The Challenge of Educational Opportunity in Public Policy: Doing Much More with Much Less"; (2) "Net Interstate Migration of Pell Grant Recipients"; (3) "'I Worked my Way Through College. You Should Too.'"; (4) "Updating the Refinancing of Higher Education Through the National Income and Product Accounts: The Cost Shift to Students Accelerates"; (5) "Parental Educational Attainment and Chance for College: Surprise, Kids! Parents Do Matter!"; (6) "Institutional Graduation Rates: Important Information Often Misused"; (7) "For Some...Anxiety About Affordability... More than Others"; (8) "Private Correlates of Educational Attainment" (9) "Educational Attainment: It's All a Matter of Degrees" (10) "Income and Educational Attainment by Gender: Where More Really Means More"; (11) "Student Price Response Coefficients: Public Policy and Social Science"; (12) "1994 High School Graduates Entered College at 1991-1993 Rates: But the Numbers Are Up"; (13) "Why Freshmen Enroll in College: Getting Ready For Life"; (14) "Academic Core Course Completion by High School Graduates, 1982 to 1992: Academic Preparation for College"; (15) "The Growing Importance of Financial Considerations in College Choice: 1980 to 1994" (16) "Tax Effort in the United States: Private Wealth, Public Poverty"; (17) "What's Wrong with the Guys?: The Question Many Women Ponder"; (18) "State Appropriations for Need Based Undergraduate Grant Programs, FY 1994 to FY1996: Targeting State Investments on Needy Students"; (19) "Ranking the States: Outreach Efforts to Low Income Students: Some Do i Better, Some Do it Worse"; (20) "Starting Salaries of College Graduates 1947 to 1995: Return on Investment"; (21) "Educational Attainment by Family Income 1970 to 1994: Savage Inequalities"; (22) "State Tax Fund Appropriations for Higher Education for FY1996: Declining Social Investment in Higher Education"; (23) "Applicants for Title IV Federal Student Financial Aid: Seeking Financial Help to Attend College"; and (24) "Private Economic Benefits and Costs of Baccalaureate Education, 1975 to 1994: Is College Still Worth It? For Whom?" (JB)

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Postsecondary Education

OPPORTUNITY

The Mortenson Research Letter on Public Policy Analysis of Opportunity for Postsecondary Education

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The Challenge of Educational Opportunity in Public Policy: Doing Much More with Much Less

As we begin a new year with a new Congress and new state governors and legislatures, we pause to reflect on the central challenge of public policy regarding opportunity for postsecondary education and training. That challenge is to do much more with much less social resource support.

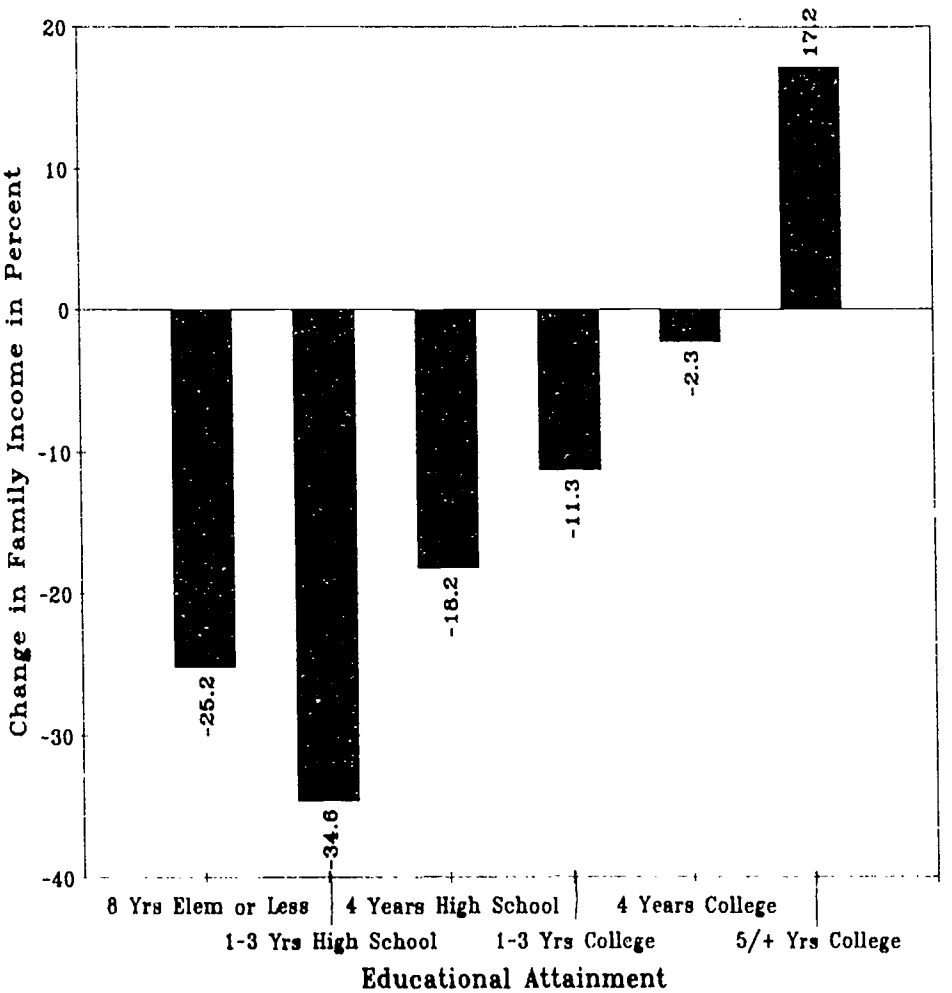
The Human Capital Agenda

For at least the last twenty years, the welfare of Americans has been redistributed along the axis of educational attainment. Those with higher educations are holding their own against inflation. However, those who ended their educations in high school are far worse off today than they were two decades ago.

This redistribution of human welfare has occurred under both Democratic and Republican presidents, Congresses, governors and legislators. The causes are not political. These are instead signs of economic evolution.

Economic systems originate in their primitive form where income and wealth are derived through exploitation of natural resources, such as mining, forestry, fisheries and agriculture. As economies grow and develop, physical capital investments add further to private and public income and wealth. Most recently, in the third stage of economic development, income and wealth are generated through investments in human capital--the minds and health of workers.

Change in Median Family Income
by Educational Attainment of Householder
Between 1973 and 1992



Labor market data collected and published in many forms by the federal government tell a consistent and dramatic story of change in the incomes of workers with different levels of educational attainment over the last twenty years. Income is a solid measure of human welfare in that

at its basic level income assures that basic survival needs are met. And at a higher level, income provides access to and choices among the abundant riches available in the American experience.

The story told by the labor market data reflect this economic evolution. Since the early 1970s, people who entered the labor market with a high school education or less started out at the bottom of the salary scale. In inflation-adjusted terms, their incomes have dropped sharply--by 20 to 30 percent--from where they started. Their lives have become an increasingly desperate and brutal race for survival. They are losing the race every day, little by little, taking down with them the lives of their dependents, especially their children. At one time within memory, a worker needed only to be honest and hardworking to secure for himself and his family a decent standard of living. Honesty and hard work are no longer sufficient.

At the other end of the educational attainment axis are people who went on to higher education and earned college degrees. They too have encountered some labor market challenges. But they entered the labor market at far higher starting salaries than did those without higher education. Moreover, their incomes have largely kept up with inflation, enabling them to maintain a lifestyle with access to and choices among the riches of the American experience. They have succeeded because they are honest, hardworking and *because they are higher educated*.

These stories from the labor market data also tell of a growing gap in the distribution of human welfare, between those with and without postsecondary education and training. Those with education beyond high school have been pulling away from those without it for more than two decades. The gap is growing, and the gap is delineated by educational attainment. Very simply the welfare of those without postsecondary education and training has been in a free-fall for two decades, and the end of that decline is nowhere in sight. If anything, with the pace of economic change quickening, their prospects are deteriorating more rapidly than ever.

Beyond the private welfare of individuals, our social welfare is directly and immediately impacted by this redistribution of private income and wealth, and the private welfare they yield. Government revenues are increasingly derived from the higher incomes of the college educated as a direct result of income redistribution across levels of educational attainment. In 1991, households headed by persons with at least some college comprised 45 percent of all households, earned 60 percent of all income, and paid 66 percent of federal income taxes. In contrast, households headed by persons without any higher education comprised 55 percent of all households, earned 40 percent of the income, and paid 34 percent of all federal income taxes. Over the last twenty years the proportion of federal income taxes paid by the college educated has grown from 42 to 66 percent, while the proportion paid by those without college education has shrunk from 58 to 34 percent.

Moreover, a growing share of the taxes paid by the college educated are going into social welfare programs for those who are not college educated. In state budgets, educational investments in the future workforce are being displaced by needs to finance health care for the poor (Medicaid) and expand the capacity of prisons. The poor (mainly women and their children) and the prisoners (mainly men) have the lowest levels of postsecondary education and training in society. Many cannot make it on their own. Thus, they draw

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Mission Statement

This research letter is founded on two fundamental beliefs. First, sound public social policy requires accurate, current, independent, and focused information on the human condition. Second, education is essential to the development of human potential and resources for both private and public benefit. Therefore, the purpose of this research letter is to inform those who formulate, fund, and administer public policy and programs about the condition of and influences that affect postsecondary education opportunity for *all* Americans.

Errata

In the December issue, the text of our TRIO article erroneously reported that New Hampshire was the only state without a Talent Search Program. The state table was correct. Our apologies to the staff of the Educational Talent Search program at the University of New Hampshire.

disproportionately on the social resources produced by those in whom investments in postsecondary education have been made in the past and are now paying social returns on those investments. As those in education correctly point out, pay now or pay later, but inevitably society will pay for the education of its citizens.

The human capital investment agenda is dictated by the changes that occur naturally in the economy and educational requirements of its labor force. It cannot be ignored, as the political system has chosen to do for the last 15 years.

The human capital agenda has both carrot and stick components. The carrot is that human capital investments pay handsome returns to both individuals and society. The stick is that if such investments are not made, both individuals and society suffer and pay anyway but in different and less socially productive forms.

Doing More with Less

While the private and social rates of return from human capitalization investments are powerful arguments for expanding such investments, only private investment is expanding. Social resource investments in human capitalization programs at the postsecondary education level have been cut back sharply at the federal level and in 49 of the 50 states over the last 15 years.

The cutback in allocation of social resource investments in human capital is so widespread and persistent as to make one wonder what national referendum dictated this reversal of social policy.

At one time within memory--as recently as the late 1970s--this country so esteemed higher education investments that it was willing to invest an ever larger share of state and federal tax resources in its future workforce through its youth. Partly this expansion was driven by the post-World War II baby boom. But in no small part this human capital investment expansion was also driven by the War on Poverty programs conceived and enacted in 1964 and 1965. These programs--including several directly related to fostering postsecondary educational opportunity for vulnerable populations--sought to reduce or eradicate poverty by investing in the minds and bodies of the poor--adding to their human capital and value to potential employers.

The social need to increase the human capital of the less well educated increased sharply after the early 1970s as the redistribution of private welfare according to educational attainment began. This redistribution began about 1973, has continued throughout the last twenty years, and in fact may be accelerating in the 1990s (although economic recession effects may blur longer term trends buried in recent labor market data).

Social resource allocation followed the twin motives of reducing poverty and reversing deteriorating private welfare throughout the 1960s and 1970s. Higher education's share of the expenditures of state and local government increased from 5.5 percent in 1962, to 7.4 percent in 1972, to a peak of 8.2 percent in 1982. But after that states began cutting back sharply, to a low of 6.4 percent in 1993 despite enrollment growth during this period. This was the smallest share of state and local government expenditures for higher education since 1964. The 1993 share is 78 percent of the peak reached in 1982.

The federal government's allocation of federal resources for higher education (limited to student financial aid) increased sharply from nothing in 1959 to a peak of 0.95 percent of federal expenditures in 1981. It too--like the states--has since dropped, to 0.70 percent in 1993. The 1993 share is 74 percent of the peak reached in 1981.

State and federal tax resources previously allocated to higher education have been diverted to other fiscal priorities, mainly health care for the poor and prisons in state budgets. This diversion of social resources has required increased private resource allocation to higher education to make up for the loss of federal and state tax resources. At the federal level this cost shift from taxpayers to students has occurred by substituting financial aid in the form of loans for grants. At the state level this cost shift has occurred by diverting tax money to other state budget priorities and increasing tuition and fee charges to students to offset institutional loss of state tax support.

The results are the same: costs of higher educating students are shifted from taxpayers to students. And for the first time since 1956, in 1993 students paid a larger share of the costs of their own educations than did state and local government taxpayers according to data from the National Income and Product Accounts.

The prospects for increased social resource investment in higher education have rarely been worse than they are today.

- Political leadership, apparently reflecting voter sentiment, seems bent on reducing taxes, cutting government expenditures and eliminating social program obligations of government.
- Legislative decisions are incurring substantial future corrections cost increases through mandatory and longer sentencing of prisoners.
- The health care drain on state finances has yet to be effectively constrained, either by reducing poverty or controlling health care

costs.

- Higher education has ranked at the bottom of state fiscal priorities for nearly 15 years, and the most recent survey of state fiscal issues barely mentions higher education at all.
- Moreover, state tax revenue systems were created in an economic era that is fast fading and are poorly positioned to tax developing economic activity in support of social needs, however they are defined and prioritized.

We see no prospect at all of any resurgence in social resource allocation to higher education investments. Higher education has been hung out to fend for itself.

Making the Best of It

The public policy dilemma we face today is the nearly impossible one of greatly broadening opportunity for postsecondary education and training at the same time that social resources allocated for this purpose have been and are likely to continue to be sharply reduced.

Ways must be found to broaden opportunities for postsecondary education and training because changes in the labor market over the last twenty years dictate greater human capitalization of the labor force. This mandate cannot be ignored. If we continue to fail to meet this challenge, we should expect to continue to divert scarce and perhaps diminishing social resources to unproductive social welfare programs for those without the human capitalization investments required to be self-supporting. The poor don't go away if we ignore them, nor do the costs of their survival. Pay now or pay later, but ultimately society will pay.

The trajectory of this social and economic policy is not a matter of speculation. Labor market, demographic, fiscal and other data make clear that we have been on this path for at least the last 15 years in virtually every state. There is no reasonable hope that financing broadened opportunity for postsecondary education and training will come from increased social resource allocations. Rather, the most realistic agenda must first focus on making better use of the social resources currently provided to higher education.

The fundamental debate must be centered on priorities and needs. Higher education's track record on these issues is not a good one.

- Many in public higher education insist that using limited state resources to subsidize the higher educations of students from high income family backgrounds is a more worthy use of such funds than is concentrating such subsidies on students from lower income family backgrounds that demonstrate financial need for such subsidies.
- Many in public higher education insist that limiting enrollments, raising admissions standards, eliminating programs, increasing class size and faculty workloads, curtailing library acquisitions, deferring facilities maintenance, making do with antiquated laboratory equipment and taking other actions that diminish the capacity, quality and affordability of higher education is of lower priority than would be tapping into the foregone institutional revenues that are available from students who could afford to pay for more or all of the cost of their own higher educations.

Capacity, quality and affordability of higher education still cost real money, lots of it. There is no way to provide and expand capacity in higher education without money. There is no way to provide depth and breadth of programmatic opportunity in higher education without money. There is no way to make college affordable to the financially needy without money (are you listening, federal government?).

These expenditures are legitimately viewed as investments because they provide significant financial returns both to individuals and society over many decades. Equally important, if these investments are not made when students are ready and searching for postsecondary opportunities, the students thus denied become prime candidates for much larger social welfare spending later in their lives.

The answer to the dilemma of how to broaden opportunity for postsecondary education and training in an environment of diminished social resources for higher education must include a refocusing of social resources on those who are truly, demonstrably needy.

This may not be the only answer. It is probably not a sufficient answer. But it is most surely a necessary answer, and it is a process that can be undertaken within higher education itself.

As long as higher education continues to ask states for money to educate students who do not need state aid to study, public higher education budget requests cannot compete with other, more pressing demands for scarce state resources. Someday we would like to see a public higher education budget request made only for dollars to educate students who truly need state assistance to finance their higher educations. When that occurs, we think governors and legislators will favor capitalizing human resources over prisoners, welfare recipients, and others who contribute little or nothing to social welfare.

Its well past time that we began this task in earnest.

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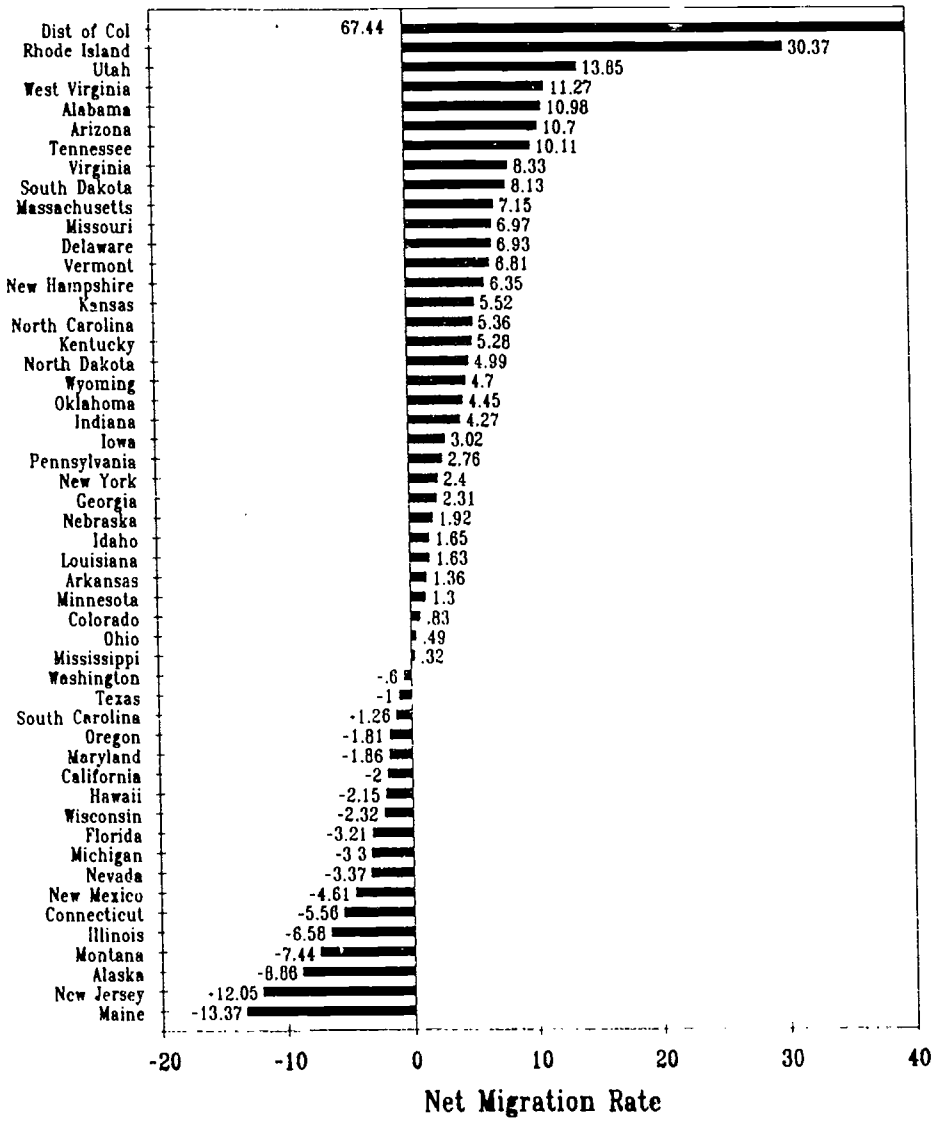
Net Interstate Migration of Pell Grant Recipients 1978-79 to 1992-93

Since its inauguration in 1973-74, the federal Pell Grant Program has retained its focus on students from low income family backgrounds. This focus persists despite repeated Congressional extensions of Pell Grant eligibility to a broader representation of students through adjustments to formulas used to calculate the eligibility index of applicants for Pell Grants. Those students added as a result of changes made in 1978, 1986 and 1992 are still clearly very needy students. However, their addition to the Program has diluted the purchasing power of the Pell Grant maximum award for those for whom the program was originally created as funding has not kept up with eligible applicant growth and college cost increases.

Under a national eligibility index formula, variations in the proportions of undergraduates in each state who receive Pell Grants are largely explained by variations in state per capita personal income as shown previously in OPPORTUNITY (#27). This national standard is helpful in measuring and comparing the efforts of states to provide state-funded financial aid to their own residents as reported in OPPORTUNITY (#22).

Here we examine another aspect of state service to their postsecondary students from low income family backgrounds: net migration of Pell Grant recipients between states. Some states have more Pell Grant recipients enrolled in their postsecondary institutions than they have state residents who receive Pell Grants. These states attract Pell Grant recipients to their institutions. Other states have fewer Pell Grant recipients enrolled in their postsecondary institutions than they have state residents receiving Pell Grants. These states are net-exporters of their students from low family income backgrounds to other states.

Pell Grant Recipient Net Interstate Migration Rates 1992-93



Because Pell Grant Program data are compiled and reported each year, the available data permit an analysis of trends in net migration of students from low income family backgrounds for each state over the last 15 years. This analysis finds that most states can be classified as a) net importers of postsecondary students from low family income backgrounds, b) net exporters, c) changing from net importers to net exporters, or d) changing from net exporters to net importers.

We interpret net migration data as reflecting each state's environment for providing postsecondary educational opportunity to its citizens from low income family backgrounds.

- *The net importers apparently provide attractive educational opportunities for Pell Grant recipients because they attract Pell recipients from other states.*
- *The net exporters fail to do so, and more of their residents leave to study in other states than enter the state.*

Across the 50 states and over time, we can expect to find some states crossing this boundary.

- *Between 1978-79 and 1992-93 six states have moved from being net exporters of Pell Grant recipients to become net importers, and thus have improved their educational environment for students from low income family backgrounds.*
- *However, eight states have shifted from being net importers to net exporters of Pell Grant recipients, and we thus conclude that their educational environment has deteriorated for students from low income families. The public higher education institutions in these states are known to be operating under extraordinary fiscal constraints from their states.*

The Data and Analysis

Summary statistics of each year's Pell Grant Program are compiled and published in the *Pell Grant End-of-Year Report* by the U.S. Department of Education.

These statistics cover many important financial aid applicant characteristics and are compiled from data reported by virtually all financial aid applicants on the various financial aid application forms (recently reduced to one by federal action). For some of the reports in the *End-of-Year Report*, data on applicants are merged with data on recipients, and this Pell Grant recipient information is also compiled and reported.

Title IV/Pell Grant End-of-Year Report 1992-93, Central Processing System Product CP/3/10, presented to U.S. Department of Education, Washington, D.C., by National Computer Systems, Iowa City, Iowa.

Among the reported summaries are Pell Grant recipients by state and control of institution, and Pell Grant recipients by state of legal residence and control of institution.

- States include the 50 states plus the District of Columbia and an "all others" category that includes Puerto Rico and the scattered Caribbean and Pacific islands associated with the United States (American Samoa, Guam, Virgin Islands, Marshall Islands, etc.) whose residents are eligible for Pell Grants.
- Institutional control has three classifications: public, private nonprofit, and private profit making.
- Recipient data includes both the number of Pell Grant recipients and the total dollars they received.

The difference between the statewide totals for enrollment by location of institution and state of residence represents the net migration of Pell Grant recipients between states that is the focus of this analysis.

Net Migration by State in 1992-93

In 1992-93 net interstate migration *rates* ranged from +67.4 percent for the **District of Columbia** to -13.4 percent for **Maine**. The District of Columbia had the largest net import *rate* for students from low income family backgrounds, and Maine had the largest state net export *rate*. (The "all others" category--largely **Puerto Rico**--had a net emigration rate of -20.1 percent.)

This net migration rate is calculated according to the following example. For the 1992-93 academic year, the District of Columbia had 6,558 residents who received federal Pell Grants. But there were 11,031 Pell Grant recipients enrolled in postsecondary institutions in the District. The difference of 4,443 is the *number* of net immigrant Pell Grant recipients for the District. This net gain, divided by the number of Pell Grant recipients who were residents of the District, is its net Pell Grant migration *rate* (4443/6558 = +67.4%). All other net interstate migration rates are calculated in a similar manner including net emigration rates.

The states with net Pell Grant recipient immigration *rates* greater than 10 percent in 1992-93 were the **District of Columbia, Rhode Island, Utah, West Virginia, Alabama, Arizona** and **Tennessee**. These data are shown in the first chart contained in this report.

The states with the largest *numbers* of net Pell Grant recipient immigrants were **New York** (+8627), **Alabama** (+8191), **Tennessee** (+7256), **Arizona** (+7113), **Utah** (+6070), and **Virginia** (+6064). Because Pell Grants are dollars, these states gained federal student financial aid. **New York** had a net gain of $18.1 million in federal Pell Grant assistance, **Alabama** $13.2 million, **Tennessee** $12.4 million, **Arizona** $11.2 million, **Utah** $10.8 million, and **Virginia** $9.2 million.

The states with the largest net Pell Grant emigration *rates* were **Maine**,

New Jersey, Alaska, Montana, Illinois and **Connecticut**. All had net migration rates greater than a negative five percent in 1992-93. Their ratesare also shown in the first chart of this report.

The states with the largest *numbers* of Pell Grant recipient emigrants were "all others" (mainly **Puerto Rico**) (-45,209), **Illinois** (-11,036), **New Jersey** (-9825), **California** (-7363), **Florida** (-6037), and **Michigan** (-5387). As net out migration states, these states lost federal Pell Grant dollars as follows: "all others" -$72.1 million, **Illinois** -$19.4 million, **New Jersey** -$15.2 million, **California** -$14.6 million, **Florida** -$9.7 million, and **Michigan** -$9.4 million.

Change in Net Interstate Migration, 1978-79 to 1992-93

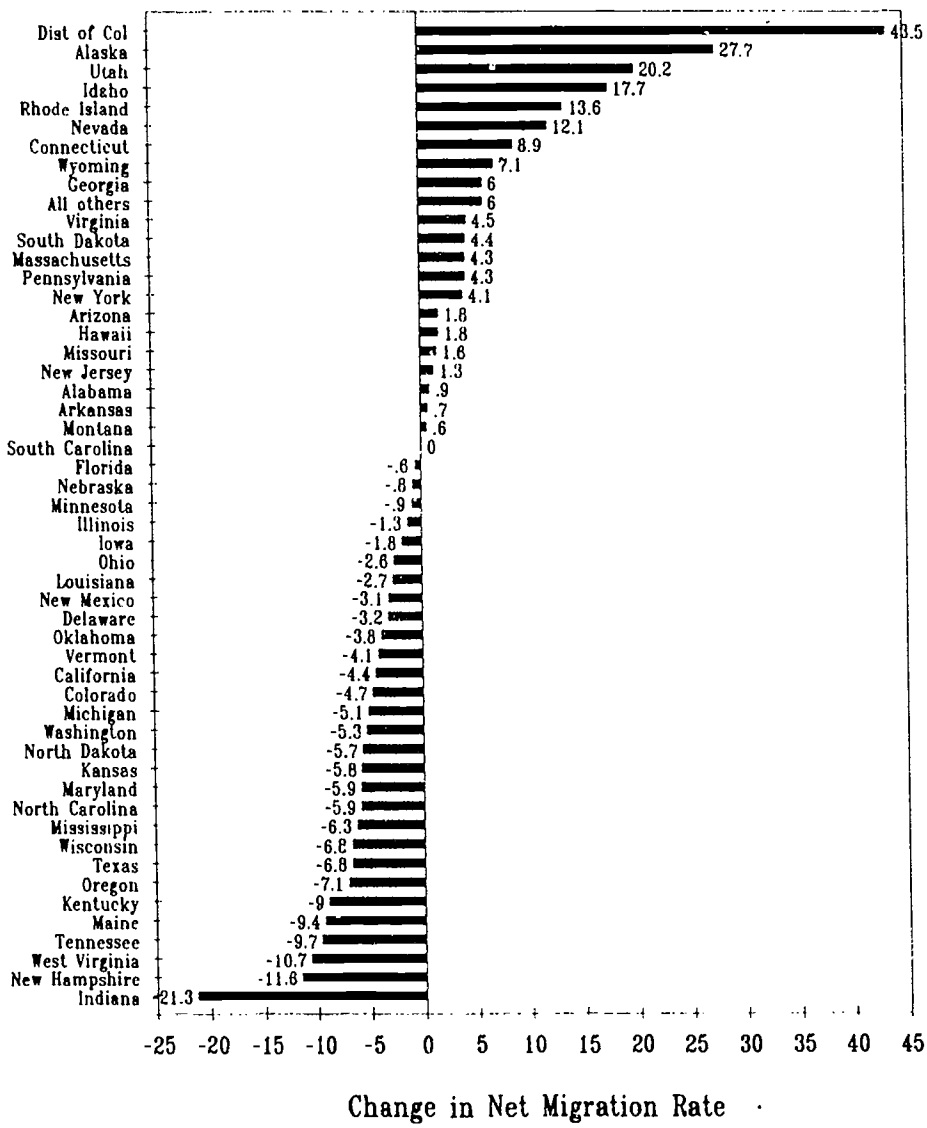
Over the fifteen year span of this analysis, trends and patterns of net migration across the states are likely to change. These trends and patterns are important to our assessment of changes in each state's postsecondary environment for students from low income family backgrounds over this 15 year period. There are different ways to examine these trends and patterns. We offer two here.

The first assessment of change in each state's climate for Pell Grant recipients is summarized in the chart on this page. Here we have plotted the change in each state's Pell Grant net migration rate between 1978-79 and 1992-93. Twenty-two states saw their Pell Grant net interstate migration rate increase, 29 saw their rates decline, and one was unchanged. (We have counted as state the District of Columbia and "all others" [mainly Puerto Rico]).

The states with the greatest increase in Pell Grant net interstate migration rates over this fifteen year period were **District of Columbia, Alaska, Utah, Idaho, Rhode Island** and **Nevada**. The states with the largest decrease in Pell Grant net interstate migration rates were **Indiana, New Hampshire, West Virginia, Tennessee, Maine** and **Kentucky**.

Another assessment is possible by eyeballing the state lines in the table on the following page on Pell Grant Net Migration Rates by State for the fifteen year period between 1978-79 and 1992-93.

Change in Pell Grant Net Interstate Migration Rates between 1978-79 and 1992-93



Most states can be assigned to one of four groups along an axis beginning with the most favorable environments for students from low income family backgrounds reflected in immigration rate and ending with the least favorable environments reflected in emigration rates. In between are states shifting from out-to-in migration (which we term as improving) or from in-to-out migration (which is a deteriorating environment). Our classification of states is the following:

Pell Grant Net Migration Rates by State
1978-79 to 1992-93

State	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93
Alabama	10.1%	7.3%	6.7%	4.8%	3.2%	1.1%	3.4%	4.9%	6.5%	2.8%	3.3%	12.3%	11.4%	10.8%	11.0%
Alaska	-36.6%	-35.8%	-35.7%	-35.1%	-39.0%	-60.3%	-56.1%	-55.9%	-53.0%	-47.5%	-29.9%	0.7%	-12.0%	-15.7%	-8.9%
Arizona	8.9%	14.1%	14.4%	14.9%	11.5%	11.4%	48.7%	81.6%	82.4%	60.0%	27.8%	12.0%	12.0%	10.1%	10.7%
Arkansas	0.7%	2.0%	1.4%	1.6%	3.7%	7.0%	14.2%	13.5%	15.2%	13.3%	10.9%	12.2%	0.4%	1.7%	1.4%
California	2.4%	2.0%	0.7%	2.3%	0.5%	-1.0%	2.5%	-4.4%	-2.5%	-3.0%	-1.5%	-0.4%	-2.4%	-1.1%	-2.0%
Colorado	5.5%	3.9%	5.0%	5.2%	3.2%	1.0%	-0.5%	-2.5%	-4.0%	-5.5%	-2.5%	-2.2%	-1.7%	-0.6%	0.8%
Connecticut	-14.5%	-18.4%	-18.6%	-15.7%	-15.4%	-10.8%	-1.6%	0.2%	13.2%	18.5%	17.9%	17.1%	37.4%	-0.6%	-5.6%
Delaware	10.1%	6.4%	7.0%	7.2%	5.6%	-1.1%	6.4%	15.0%	170.9%	429.2%	413.1%	64.8%	2.2%	10.9%	6.9%
Dist of Col	24.0%	357.9%	403.8%	112.6%	49.0%	44.6%	38.3%	28.5%	53.3%	60.0%	56.0%	66.4%	54.8%	53.8%	67.4%
Florida	-2.6%	-2.8%	-1.1%	-1.5%	-0.9%	1.3%	1.1%	-0.3%	3.8%	4.1%	4.9%	0.1%	-0.2%	-2.3%	-3.2%
Georgia	-3.7%	-4.8%	-4.7%	-5.6%	-5.8%	-4.9%	2.4%	2.3%	-0.2%	-8.3%	-6.6%	-0.8%	-1.5%	1.0%	2.3%
Hawaii	-3.9%	-13.2%	-9.8%	-10.4%	-7.7%	-10.0%	-2.7%	-2.7%	-3.0%	-7.5%	-10.1%	-9.7%	1.0%	0.2%	-2.1%
Idaho	-16.1%	-15.8%	-14.8%	-16.6%	-18.8%	-20.7%	-3.2%	-3.4%	-3.6%	-5.4%	-3.0%	-1.4%	1.2%	2.1%	1.6%
Illinois	-5.3%	-6.7%	-6.7%	-7.4%	-8.8%	-8.7%	-6.0%	-6.1%	-6.6%	-7.0%	-7.1%	-6.4%	-6.0%	-6.3%	-6.6%
Indiana	25.5%	21.9%	18.5%	18.0%	19.4%	18.2%	1.5%	-0.7%	-1.1%	2.2%	2.3%	3.2%	3.4%	4.3%	
Iowa	4.6%	5.6%	6.0%	3.6%	1.8%	1.7%	2.6%	1.6%	1.3%	1.3%	2.2%	2.2%	2.0%	2.2%	3.0%
Kansas	11.3%	9.8%	11.2%	10.0%	7.7%	5.2%	4.9%	6.8%	14.8%	17.3%	24.1%	17.5%	6.6%	6.5%	5.5%
Kentucky	14.2%	14.0%	12.7%	7.8%	7.9%	8.6%	13.2%	11.7%	13.4%	7.8%	3.9%	2.8%	2.1%	6.5%	5.3%
Louisiana	4.3%	2.2%	2.1%	1.0%	-1.1%	-0.9%	3.5%	2.5%	-0.2%	-7.0%	-3.0%	-0.9%	2.7%	2.6%	1.6%
Maine	-4.0%	-2.5%	-5.0%	-6.2%	-8.5%	-9.5%	-8.0%	-8.7%	-9.2%	-10.6%	-9.8%	-10.6%	-9.7%	-12.1%	-13.4%
Maryland	4.0%	3.4%	5.2%	1.5%	-0.9%	-2.9%	-3.0%	-4.6%	-10.4%	-10.4%	-11.8%	-4.6%	-7.1%	-5.3%	-1.9%
Massachusetts	2.8%	3.6%	3.8%	3.2%	1.8%	1.5%	4.1%	6.6%	10.4%	10.0%	11.6%	11.7%	10.2%	9.0%	7.2%
Michigan	1.7%	0.6%	-0.3%	-3.3%	-4.3%	-4.5%	-2.9%	-3.4%	-2.5%	-5.4%	-6.1%	-4.8%	-4.0%	-3.8%	-3.3%
Minnesota	2.2%	0.6%	0.5%	-0.1%	-1.4%	-1.4%	0.7%	1.2%	1.7%	2.5%	2.2%	1.8%	1.7%	1.3%	1.3%
Mississippi	6.7%	6.5%	4.0%	2.5%	1.6%	1.9%	-0.8%	-3.3%	-6.4%	-9.6%	-14.8%	-7.0%	-2.4%	-1.1%	0.3%
Missouri	5.4%	4.9%	4.0%	5.3%	2.1%	2.7%	7.5%	6.2%	7.1%	8.4%	10.4%	9.6%	7.9%	6.9%	7.0%
Montana	-8.0%	-7.2%	-4.8%	-5.5%	-5.1%	-5.4%	-5.8%	-8.3%	-8.5%	-12.3%	-11.1%	-10.9%	-10.4%	-8.6%	-7.4%
Nebraska	2.8%	3.7%	3.6%	3.5%	2.0%	0.3%	1.6%	0.5%	1.1%	-1.1%	-0.1%	0.8%	1.6%	2.4%	1.9%
Nevada	-15.4%	-16.0%	-12.4%	-12.1%	-11.1%	-10.9%	-10.6%	-6.3%	-13.0%	-12.0%	-4.3%	-2.4%	34.8%	13.6%	-3.4%
New Hampshire	17.9%	22.4%	23.6%	20.0%	16.9%	15.1%	14.7%	15.1%	12.2%	11.9%	9.4%	5.5%	2.4%	6.9%	6.3%
New Jersey	-13.4%	-18.8%	-18.4%	-17.8%	-17.2%	-17.1%	-16.2%	-16.7%	-17.4%	-16.1%	-23.3%	-11.0%	-10.9%	-10.5%	-12.0%
New Mexico	-1.5%	5.9%	-3.2%	-3.9%	-5.6%	-6.4%	-7.0%	-7.5%	-7.8%	-12.8%	-12.8%	-9.5%	-9.1%	-7.1%	-4.6%
New York	-1.7%	-2.0%	-3.3%	-2.3%	-2.1%	-1.8%	-1.0%	-0.4%	2.0%	0.9%	1.4%	1.4%	2.6%	3.4%	2.4%
North Carolina	11.2%	10.3%	8.9%	8.1%	7.5%	8.0%	10.6%	11.3%	12.5%	11.4%	9.9%	9.0%	8.8%	6.0%	5.4%
North Dakota	10.7%	8.0%	8.8%	11.0%	12.8%	12.5%	11.4%	10.0%	7.5%	6.2%	7.7%	7.5%	2.7%	3.5%	5.0%
Ohio	3.1%	1.2%	1.3%	0.5%	-0.1%	-0.4%	2.2%	-2.3%	-0.4%	-4.8%	-0.8%	0.7%	6.2%	3.6%	0.5%
Oklahoma	8.2%	9.6%	8.9%	7.5%	7.3%	4.1%	6.0%	3.7%	1.7%	0.1%	1.0%	1.7%	2.5%	4.5%	4.5%
Oregon	5.3%	3.8%	2.3%	1.9%	-0.3%	-0.7%	3.5%	1.5%	1.5%	-0.7%	-0.6%	-1.5%	-1.0%	-2.3%	-1.8%
Pennsylvania	-1.5%	0.0%	-0.1%	-1.3%	-1.9%	-2.5%	-0.3%	1.6%	1.0%	0.5%	0.6%	0.7%	3.0%	2.6%	2.8%
Rhode Island	16.7%	18.6%	17.1%	14.9%	14.6%	14.4%	16.2%	13.8%	16.4%	17.9%	18.6%	22.9%	25.5%	27.4%	30.4%
South Carolina	-1.3%	-0.4%	1.5%	1.1%	0.7%	1.2%	-0.1%	-1.4%	-2.8%	-4.4%	-4.7%	0.5%	-4.6%	-0.7%	-1.3%
South Dakota	3.7%	2.5%	0.3%	2.7%	2.1%	4.9%	5.4%	6.1%	12.4%	7.9%	5.0%	3.9%	5.2%	8.2%	8.1%
Tennessee	19.8%	17.9%	13.4%	10.0%	9.8%	8.9%	15.1%	14.0%	14.0%	10.0%	12.5%	12.7%	11.8%	11.5%	10.1%
Texas	5.8%	5.1%	5.0%	5.6%	4.9%	3.7%	2.8%	1.7%	-1.3%	-2.7%	-3.6%	-2.8%	-2.6%	-1.6%	-1.0%
Utah	-6.4%	-9.4%	-9.7%	-9.4%	208.4%	189.5%	23.2%	19.6%	19.8%	16.2%	14.8%	14.0%	13.3%	14.4%	13.8%
Vermont	10.9%	14.5%	10.3%	4.5%	1.6%	-1.4%	1.2%	2.0%	1.1%	0.8%	2.6%	3.7%	4.5%	7.9%	6.8%
Virginia	3.9%	4.3%	4.1%	4.0%	4.9%	7.5%	8.6%	11.0%	6.9%	1.7%	7.3%	6.0%	7.2%	7.7%	8.3%
Washington	4.7%	4.0%	3.7%	1.8%	-0.5%	-0.8%	-0.9%	-0.3%	-1.7%	-4.0%	-2.1%	-1.0%	0.0%	-0.3%	-0.6%
West Virginia	21.9%	25.8%	21.0%	21.2%	20.1%	15.8%	19.0%	18.7%	14.5%	9.7%	13.1%	11.8%	12.3%	13.3%	11.3%
Wisconsin	4.5%	3.2%	3.0%	2.5%	1.9%	1.7%	0.5%	-0.0%	0.4%	-0.8%	-1.2%	-1.0%	0.6%	-1.8%	-2.3%
Wyoming	-2.4%	-1.0%	-2.2%	2.7%	0.6%	-3.2%	-5.2%	-4.4%	2.0%	-0.0%	1.1%	-0.5%	2.9%	5.5%	4.7%
All others	-26.0%	-45.7%	-36.7%	-14.5%	-20.1%	-16.7%	-20.6%	-19.2%	-25.4%	-12.1%	-17.9%	-19.0%	-22.8%	-23.8%	-20.1%

Note: A more detailed four page version of this table including the numbers of Pell Grant recipients by state of institution, by state of residence, and net migration for each of the fifteen years shown is available to subscribers on request.

State Environment for Pell Grant Recipients Based on Net Migration Patterns

Net Importers (Good)	Net Exporters to Net Importers (Improving)	Variable (Mixed)	Net Importers to Net Exporters (Deteriorating)	Net Exporters (Bad)
Alabama	Georgia	Florida	California	Alaska
Arizona	Idaho	Louisiana	Colorado	Connecticut
Arkansas	New York	Ohio	Maryland	Dist of Columbia
Delaware	Pennsylvania		Mississippi	Hawaii
Indiana	Utah		Oregon	Illinois
Iowa	Wyoming		Texas	Maine
Kansas			Washington	Michigan
Kentucky			Wisconsin	Montana
Massachusetts				Nevada
Minnesota				New Jersey
Missouri				New Mexico
Nebraska				South Carolina
New Hampshire				All others
North Carolina				
North Dakota				
Oklahoma				
Rhode Island				
South Dakota				
Tennessee				
Vermont				
Virginia				
West Virginia				

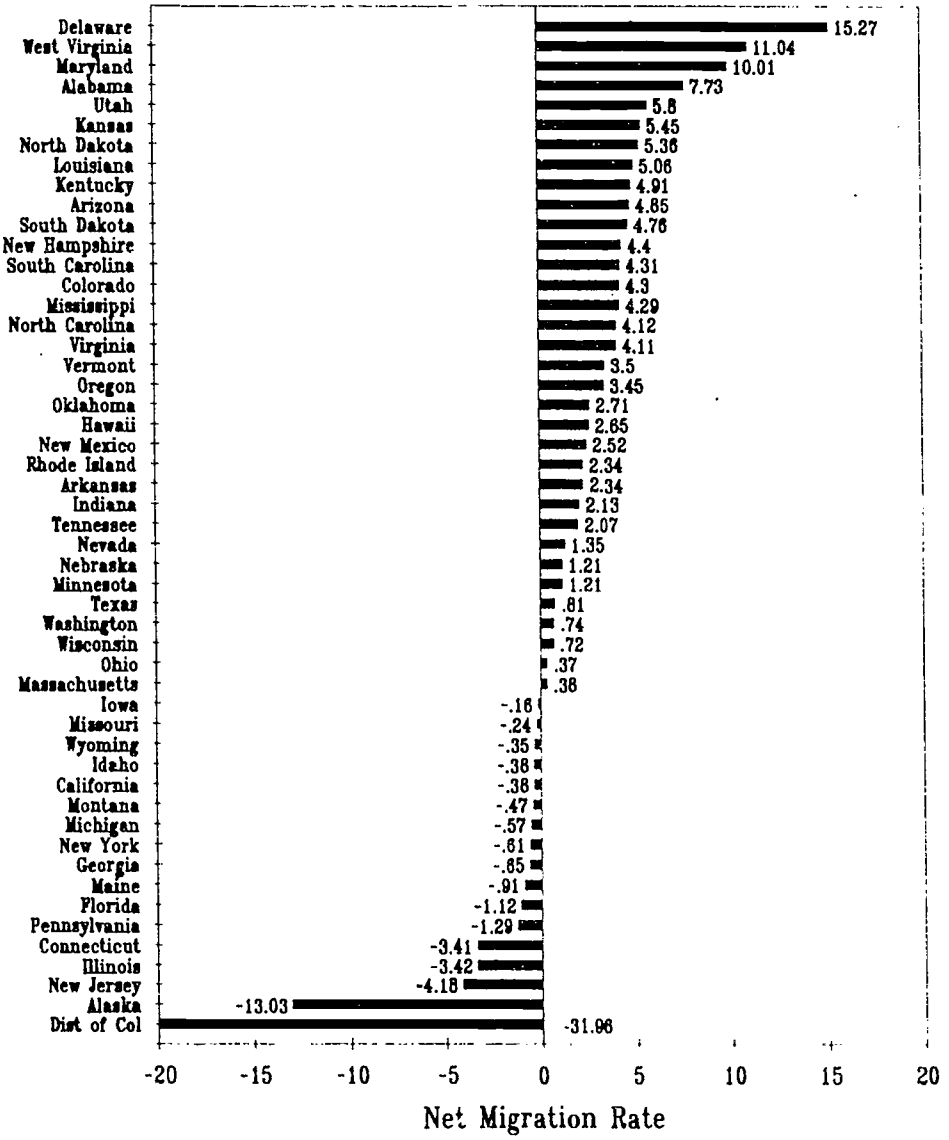
The states in the first column are the traditional net importers of Pell Grant recipients, and the states in the last column are the traditional net exporters.

Perhaps most encouraging in the dynamics of shifting state environments for the education of students from low income family backgrounds are those states that have moved from being net exporters to net importers: **Georgia, Idaho, New York, Pennsylvania, Utah** and **Wyoming**. Generally the increases in the net migration rates are not great, but they have shifted the states from negative to positive territory.

The most discouraging are those states that were once net importers of Pell Grant recipients but have become net exporters. These states are **California, Colorado, Maryland, Mississippi, Oregon, Texas, Washington** and **Wisconsin.**

The changing state climate for students from low income family backgrounds appears to be related to changes in state tax support for higher education in the states. Our measure of state tax support for higher education is state tax fund appropriations for operating expenses of higher education per $1000 of personal income. (See **OPPORTUNITY** #29, November 1994, for detail.) *Overall, state tax appropriations per $1000 of personal income for higher education declined by 28.8 percent between the peak in 1978-79 and 1994-95. In the six states listed above where the state environment for Pell Grant recipients improved between 1978-79 and 1992-93, the decline in state tax appropriations for higher education averaged 25.0 percent. In the eight states where the state environment for Pell Grant recipients deteriorated, the average decline in state appropriations*

Pell Grant Recipient Net Interstate Migration Rates for Public Higher Education, 1992-93



for higher education per $1000 of personal income was 33.7 percent. The greater reductions in state tax support for higher education appear to have had especially adverse impacts on the state environments for students from low income family backgrounds.

Net Migration for Public Higher Education in 1992-93

The *Pell Grant End-of-Year Report* data are tabulated by institutional control: public, private nonprofit, and private profit making. These tabulations permit state-by-state analysis of net interstate Pell Grant recipient migration by institutional control.

In 1992-93, 64.7 percent of all Pell Grant recipients were enrolled in public colleges, universities and other postsecondary institutions. The public postsecondary institutions in **Delaware, West Virginia, Maryland** and **Alabama** had the highest net import *rates* among Pell Grant recipients, as shown in the attached chart. Pell Grant recipients came into these states and enrolled in public institutions at somewhat higher rates than did residents of these states leave to enroll in public institutions elsewhere. The states with the largest net gain in *numbers* of Pell Grant recipients were **Alabama** (+4551), **Maryland** (+3471), **Louisiana** (+3166), **North Carolina** (+2403), **Kentucky** (+2281), **Arizona** (+2219), **West Virginia** (+2071) and **Virginia** (+2037).

The states with the largest net export rates for public institutions in 1992-93 were the **District of Columbia, Alaska, New Jersey, Illinois** and **Connecticut**. More state residents with Pell Grants left these states to study in public higher education institutions elsewhere than did students with Pell Grants come from other states to study in these. The states with the largest *numbers* of Pell Grant recipient emigrants were **Illinois** (-3692), **New Jersey** (-2046), **Florida** (-1362), **New York** (-1146) and **Pennsylvania** (-1108). In addition, the "all others" category (mainly **Puerto Rico**) sent 31,049 more Pell Grant recipients to the states than they imported from the states.

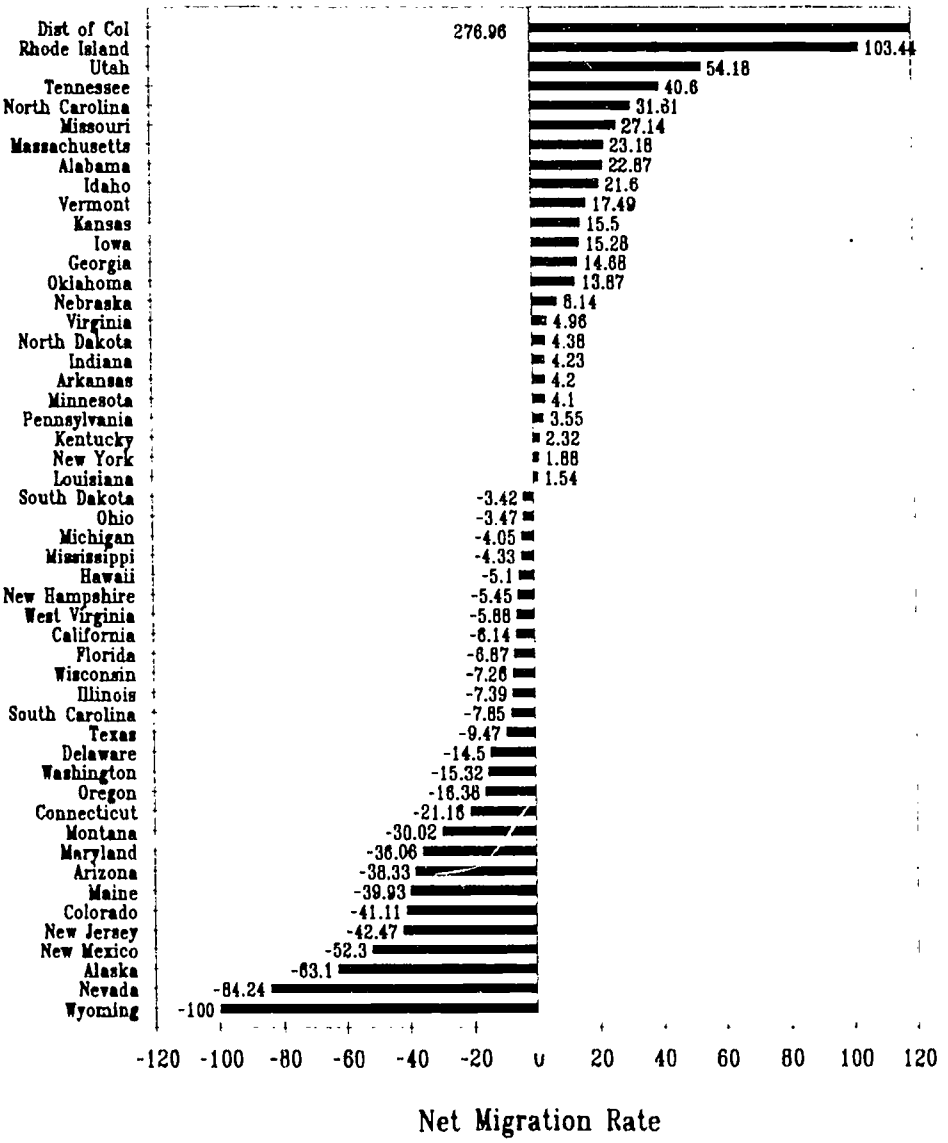
Net Migration for Private Nonprofit Higher Education in 1992-93

In 1992-93, 17.9 percent of all Pell Grant recipients were enrolled in private nonprofit colleges and universities. The private nonprofit higher education institutions in the **District of Columbia, Rhode Island, Utah, Tennessee** and **North Carolina** had the highest net immigration rates. That is, private colleges and universities in these states attracted more Pell Grant recipients as a proportion of Pell Grant residents of these states than any other states. Each of these states has major private

institutions that draw in nonresidents with Pe' Grants. The states with the largest *numbers* of net Pell Grant immigrants were **Massachusetts** (+5519), **Utah** (+4398), **District of Columbia** (+4376), **Tennessee** (+4155), **Missouri** (+4149), **North Carolina** (+3648) and **Rhode Island** (+3312).

The states with the largest net Pell Grant recipient rate deficits for private colleges and universities were **Wyoming, Nevada, Alaska, New Mexico, New Jersey** and **Colorado**. These states generally have relatively small private sectors, and thus students wanting to enroll in a private college or university had to leave their state of residence to do so. Wyoming, for example, has no private colleges or universities. Thus all 534 Wyoming residents with Pell Grants who were enrolled in private nonprofit higher education had to leave Wyoming to enroll in such institutions. The states with the largest net *numbers* of Pell Grant emigrants enrolled in private nonprofit higher education were **New Jersey** (-6058), **Illinois** (-2532), **California** (-2399), **Texas** (-2327) and **Maryland** (-2193). In addition, the "all others" category (mainly **Puerto Rico**) sent to the states 10,441 more Pell Grant recipients than they imported in 1992-93.

Pell Grant Recipient Net Interstate Migration Rates for Private Nonprofit Higher Education, 1992-93

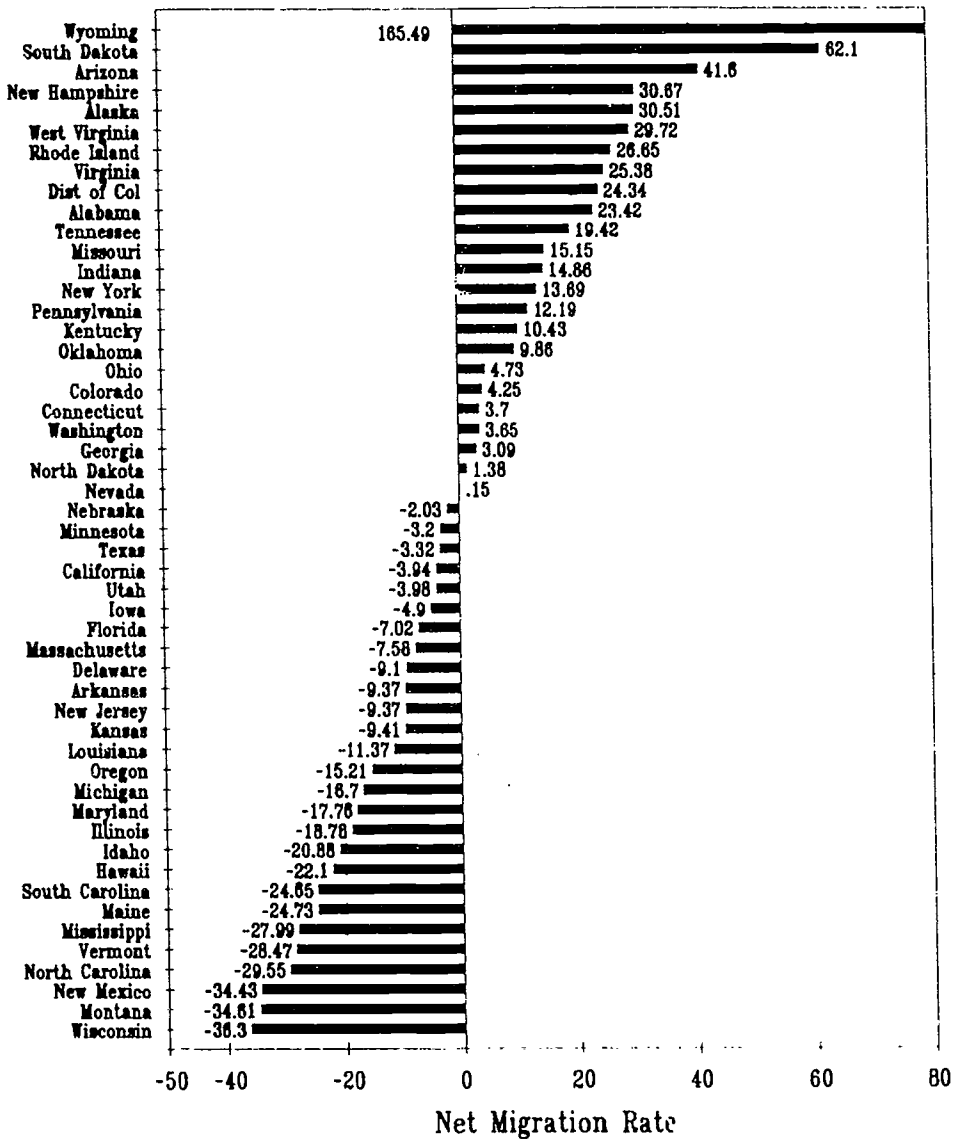


Net Migration for Profit Making Postsecondary Education in 1992-93

In 1992-93, 17.4 percent of all Pell Grant recipients were enrolled in private profit making postsecondary institutions. The states with the largest net immigration *rates* for private profit making schools were **Wyoming, South Dakota, Arizona, New Hampshire** and **Alaska**, as shown on the attached chart. With the exception of Arizona, these states had only small profit making postsecondary sectors and thus small numbers of net immigrants contributed to large net immigration rates. The states with the largest *numbers* of net Pell Grant immigrants for profit making schools were **New York** (+7565), **Arizona** (+6692), **Pennsylvania** (+4115), **Virginia** (+3575), **Alabama** (+2048) and **Tennessee** (+2045).

The states with the largest net emigration *rates* for Pell Grant recipients in profit making schools were **Wisconsin, Montana, New Mexico, North Carolina, Vermont** and **Mississippi**. The states with the largest *numbers* of net Pell Grant emigrants among those enrolled in profit making institutions were **Illinois** (-4812), **California** (-4109), **Michigan** (-3362), **Florida** (-3140), and **Maryland** (-2277). The "all others" category (mainly **Puerto Rico**) exported 3739 more Pell Grant recipients to proprietary institutions in the states than they imported from the states.

Pell Grant Recipient Net Interstate Migration Rates for Private For-Profit Postsecondary Education, 1992-93



Across all three types of institutions, some states were net importers in all three categories, some were net exporters in all three, and most were mixed with net gains in one or two and losses in the remainder. The states that were net importers of Pell Grant recipients in all three categories were: **Rhode Island, Alabama, Tennessee, Virginia, Kentucky, North Dakota and Oklahoma**. The states that were net exporters of Pell Grant recipients in all three categories were "all others," **Maine, New Jersey, Montana, Illinois, Michigan, Florida** and **California**.

Summary

We set out to use net migration of Pell Grant recipients as a measure of each state's environment for providing opportunity for students from low income family backgrounds. The analyses and findings point us toward the following conclusions.

There are five states that were net exporters of Pell Grant recipients overall in 1992-93, net exporters of Pell Grant recipients for each of the three types of institutional control, plus their net migration rate for Pell Grant recipients declined between 1978-79 and 1992-93. They are: **Maine, Illinois, Michigan, Florida** and **California**. Each of these states was also a net exporter of college freshmen who graduated from high school during the previous 12 months, as reported in **OPPORTUNITY** #30 last month. These findings indicate that the environment for students from low income family backgrounds is not as attractive as is the environment provided by other states. Our analysis does not say why--only that this conclusion is supported by the findings reported here.

In addition, there are six states where the Pell Grant net migration rate in 1992-93 was negative and deteriorated between 1978-79 and 1992-93. These six states are: **New Mexico, Wisconsin, Maryland, Oregon, Texas** and **Washington**. For the same reasons, the environment for students from low income families in these states should be carefully examined.

Index of Postsecondary Opportunity

Finally, these data when combined with other state-level analyses of opportunity for postsecondary education and training suggest that significant parts of the environment within states for education after high school can be measured and compared to those of other states. Many of these comparisons have been examined and reported in previous issues of **OPPORTUNITY**.

In a future issue of this research letter, we will propose *for discussion* a "State Index of Postsecondary Opportunity" based on these various measures of state effort, especially for the vulnerable populations that are the targets of public policy, programs and appropriations aimed at broadening educational opportunity.

FY1995 State Budget Actions

The National Conference of State Legislatures (NCSL) has released its final annual report on state budget actions for the 1995 fiscal year. This report updates our presentation from the NCSL preliminary survey and report published in the September 1994 issue of **OPPORTUNITY**.

Higher educational opportunity costs money: capacity costs money, quality costs money and affordability costs money. Without adequate and appropriate funding, higher educational opportunity is sacrificed, especially for vulnerable populations such as those from low income, first generation and minority backgrounds. The sharp retrenchment in state financing of higher education over the last 15 years has produced the expected compromises to capacity, quality and affordability for these populations. It is against this background that we examine state financing of higher education, state-by-state and year-by-year. The overall picture is better than it has been in recent years, but not by much.

The NCSL report is especially valuable to those concerned with public higher education finance because it is the first report on state appropriations for higher education, and in particular because it highlights the competition for limited state funds between higher education, K-12 education, corrections, AFDC, and Medicaid. These five areas accounted for more than 60 percent of state general fund appropriations for FY1995 and generally draw significant public scrutiny and discussion in the annual budget cycles of the states. Higher education accounted for about 12 percent of state general fund appropriations for FY1995.

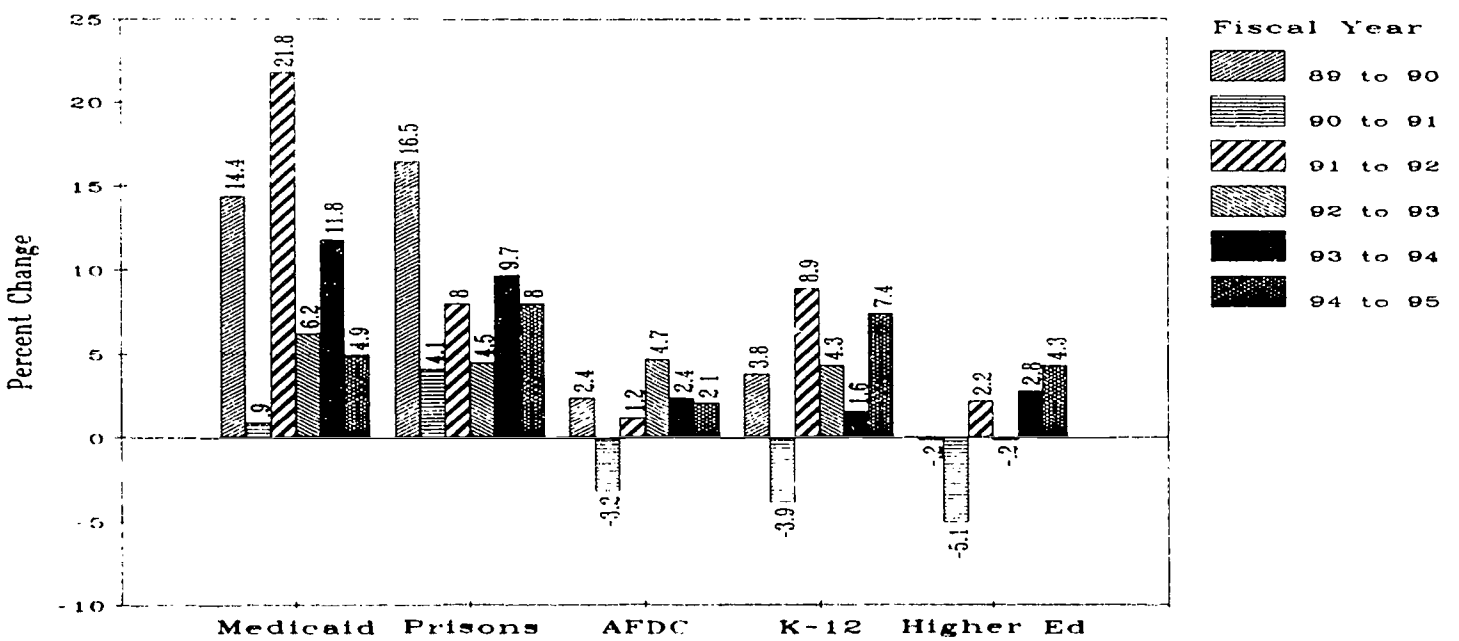
State appropriations include both appropriations from each state's general fund plus the appropriation of "earmarked" funds. General fund budgets are the largest single source of funding for state programs and comprise about half of total state budgets. With some exceptions most state tax revenue goes into the state general fund. Additional appropriations from earmarked funds also support state general fund appropriations for higher education in 21 states.

Eckl, C. L., Carter, K., and Perez, A. *State Budget Actions 1994.* Denver: National Conference of State Legislatures. November 1994.

Recent Trends and Patterns

FY1995 state general fund appropriations for higher education were $40,907,800,000, or 11.7 percent of all state general fund appropriations. This was the same as

Annual Changes in Major Expenditure Categories
from State General Funds
FY1990 to FY1995



the 11.7 percent in FY1994, but down from 12.9 percent in FY1993, 13.0 percent in FY1992, and 13.4 percent in FY1991 according to past NCSL reports. Higher education's share of state budgets held constant in FY1995.

The magnitude of this decline for higher education since FY1991 is readily measurable: each one percent decline in state general fund budget shares cost higher education about $3.5 billion. The 1.7 percent loss in higher education's share of state general fund appropriations in FY1995 compared to FY1991 meant that public higher education received about $5.9 billion less than it would have if it had received the FY1991 share of state general fund budgets. The loss of 1.7 percent in state general fund budget share resulted in a 12.6 percent reduction in state general fund appropriations for higher education during this period.

In twenty one states, general fund appropriations are supplemented with earmarked funds. These funds are special funds that are dedicated to higher education. In addition to the $39.4 billion in state general funds appropriated for higher education, earmarked funds added $2.4 billion to state funding in these 21 states. Over half of these earmarked funds for higher education were produced in just three states: **New York** ($643 million) where earmarked funds provided 25 percent of all state higher education funding, **New Mexico** ($383 million and 47 percent), and **Florida** ($338 million and 17 percent).

Winners and Losers

FY1995 appropriations from general and earmarked funds compared to FY1994 expenditures showed a 4.3 percent increase for higher education across the states. This was the largest increase in the last six years. But it was also less than the 4.8 percent increase in general fund appropriations. Corrections was the big winner at 8.0 percent increase, followed by 7.4 percent for K-12 education, and 4.9 percent increase for Medicaid. AFDC funding had the smallest increase at 2.1 percent.

Across the states the range in funding changes was from +39.8 percent in **Mississippi** to -5.2 percent in **Washington**. States with funding increases greater than 10 percent also included **Georgia** (+15.8%), **Alabama** (+14.4%), **Idaho** (12.0%), **Rhode Island** (10.8%) and **Maryland** (+10.3%). State funding reductions for higher education also occurred in **Montana** (-3.8%), **Texas** (-2.4%), **Alaska** (-1.6%), **Kansas** (-1.4%), **New Jersey** (-1.2%), and **Vermont** (-1.0%).

Leading Fiscal Issues

The annual NCSL survey includes a subjective assessment of the three top fiscal issues in each state during the 1994 legislative session. This assessment provides some insight into higher education's fiscal priority in the states, especially compared to competing demands for limited state resources. The numbers of states listing leading fiscal issues were:

K-12 education	18 states
Lowering taxes	18 states
Health services	14 states
Welfare, social services	9 states
State employee salaries	8 states
Corrections	6 states
Higher education	3 states

The three states listing higher education as a major fiscal issue were **Colorado, Tennessee** and **West Virginia**. Apparently governors and legislators in the other 47 states plus Puerto Rico continued to feel higher education was not a top state fiscal issue in 1994 despite 15 years of steady assault on public higher education funding.

Bleeding for the Poor

The National Association of State Budget Officers (NASBO) conducts a parallel survey of state spending using somewhat different categories for expenditures. A recent NASBO report showed changing fiscal priorities of states with a comparison of shares of state spending for each of these functions in FY1989 and FY1993.

1993 State Expenditures Report. March 1994. Washington, DC: National Association of State Budget Officers.

Our version of the NASBO chart is shown on page 16. The only category of state expenditures that grew between FY1989 and FY1993 was Medicaid. All other expenditure categories (except corrections) shrank to pay for the exploding share of state expenditures claimed by health care for the poor. Higher education was only one of many victims in this reallocation of state resources. But this is a painful reminder of the recent failure of Congress to address the ever growing claims of health care on national resources including those investments that offer some promise of reduced Medicaid costs in the future.

Human Decapitalization

The reductions in higher education's share of state appropriations and expenditures reported by NCSL and NASBO do not describe the whole picture of higher education finance in the United States. The revenues of higher education include institutional charges, federal sources, gifts and endowment income, auxiliary enterprises, and other sales and services. But states still provide by far the largest source (38%) of public higher education's revenues. The decline in state financial support for higher education has been partially made up by large increase in tuition and fee charges to students. These students charges have been imposed almost entirely without state (or federal) regard for the financial

Percent Change in State Funding for Major Program Categories FY1994 Expenditures to FY1995 Appropriations

State	Higher Education	K-12 Education	Corrections	AFDC	Medicaid	General Fund Appropriations
Mississippi	39.8%	10.6%	9.9%	7.6%	2.4%	16.6%
Georgia	15.8	3.7	11.3	3.4	11.3	6.3
Alabama	14.4	16.2	-3.0	2.9	15.8	7.5
Idaho	12.0	16.6	12.8	9.4	10.7	13.9
Rhode Island	10.8	N/R	0.0	-4.1	8.2	3.9
Maryland	10.3	6.4	6.0	-3.1	5.5	4.8
Florida	8.5	6.8	9.2	-4.9	10.6	7.6
Utah	8.5	6.8	9.3	10.9	15.7	8.6
Arizona	8.3	6.4	19.6	-2.9	7.9	8.7
New Mexico	8.2	8.7	8.1	4.6	17.5	1.9
Missouri	7.6	16.4	9.0	3.6	17.5	8.3
Puerto Rico	7.3	9.4	6.3	13.6	2.3	5.8
Ohio	6.4	4.8	11.6	3.5	7.2	8.7
Oregon	6.4	25.1	0.8	11.2	20.6	6.2
New Hampshire	6.2	-9.9	7.1	19.3	N/R	-16.8
Louisiana	6.0	2.8	0.5	-5.9	-9.8	2.9
Delaware	5.9	7.6	8.1	-1.4	4.3	17.3
Massachusetts	5.3	13.2	N/R	N/R	2.8	5.1
Illinois	5.2	4.6	5.0	8.3	6.2	2.6
California	5.0	3.3	9.0	1.2	-5.6	4.2
North Carolina	4.9	9.1	20.9	3.7	19.2	15.7
Wyoming	4.7	-12.6	10.2	-12.6	33.6	-1.0
Pennsylvania	4.3	2.4	19.5	3.2	6.5	4.8
North Dakota	4.1	4.1	4.0	3.9	4.0	4.1
Minnesota	4.1	4.1	14.2	-3.8	11.2	4.1
Tennessee	3.9	4.0	-0.9	12.1	-1.2	1.1
Virginia	3.8	9.8	20.3	1.0	13.7	7.1
Iowa	3.6	2.9	3.1	-1.0	7.1	3.5
South Dakota	3.5	9.7	12.3	2.5	12.5	0.5
Nebraska	3.2	6.4	6.1	19.4	7.7	2.9
Michigan	3.1	72.0	7.5	-4.7	3.4	1.9
Colorado	3.0	6.1	8.7	7.0	5.2	5.9
Kentucky	2.3	4.5	9.6	-0.2	8.2	6.1
New York	2.3	1.3	5.3	6.3	N/R	7.2
South Carolina	2.2	5.1	7.7	2.4	2.4	5.0
West Virginia	2.2	5.4	36.8	21.8	11.6	5.7
Wisconsin	1.8	12.6	7.5	1.1	6.9	7.8
Hawaii	1.6	-0.1	4.0	17.6	4.9	5.9
Connecticut	1.0	4.1	16.8	3.2	9.7	6.4
Maine	1.0	0.4	13.3	-16.4	-1.0	3.8
Arkansas	0.7	5.9	5.2	6.0	11.0	3.5
Indiana	0.6	2.9	0.3	4.0	-12.8	-1.0
Oklahoma	0.2	3.4	6.1	-6.0	0.7	3.2
Nevada	0.1	6.0	2.4	14.2	20.7	7.8
Vermont	-1.0	-1.0	15.4	-7.2	8.4	4.2
New Jersey	-1.2	-12.4	2.9	-2.6	3.1	1.8
Kansas	-1.4	4.9	5.4	6.4	6.9	6.2
Alaska	-1.6	2.5	-3.4	3.4	2.7	-22.4
Texas	-2.4	2.1	1.9	6.7	12.2	0.8
Montana	-3.8	2.2	-0.3	5.2	7.2	24.2
Washington	-5.2	5.1	4.5	1.4	17.7	1.3
Average	**4.3%**	**7.4%**	**8.0%**	**2.1%**	**4.9%**	**4.8%**
Median	**3.9%**	**5.0%**	**7.5%**	**3.4%**	**7.2%**	

N/R = no response. Source: *State Budget Actions 1994*, National Conference of State Legislatures.

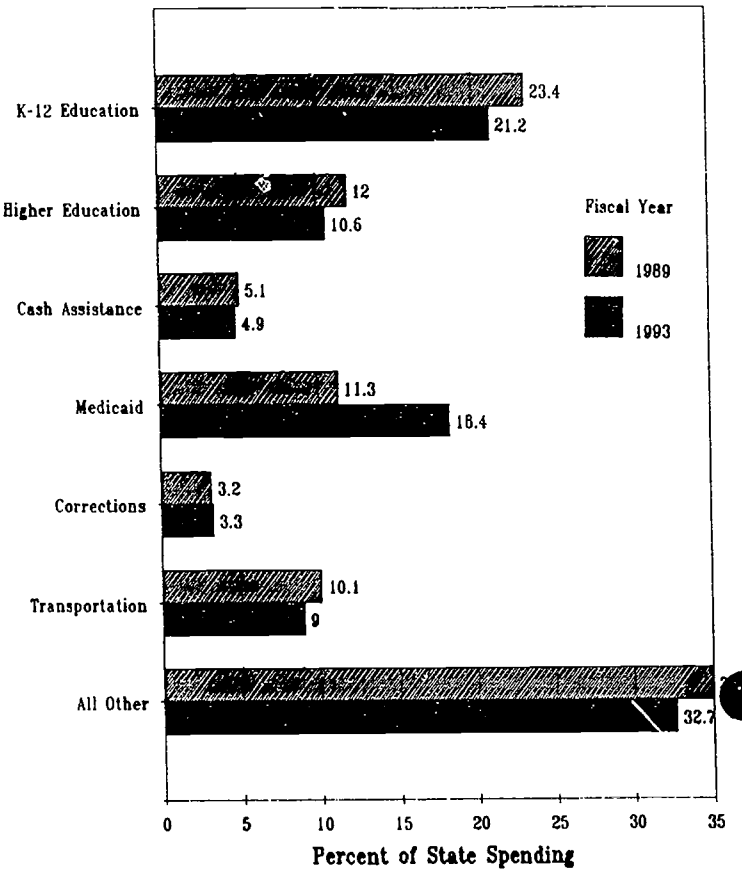
resources of students to pay them. And since many students cannot pay them, they borrow from their future incomes to finance their current higher education expenses.

The paradox of educational finance is that while education is the most obvious remedy for the social ills of poverty and crime, states are *reducing* the share of their resources for the remedy for these social ills while they are *increasing* the share of their resources allocated to their symptoms.

Clearly the social values reflected in these state fiscal priorities have changed over time. Those in education will say "pay now or pay later, but society will pay for the education of its citizens." Apparently the choice has been made to address symptoms rather than causes of social ills. This choice reflects what economists call the discount rate on future values, or more simply the way we see the needs of the present versus the needs of the future. We have chosen to diminish social investment in human capital that pays off in the future in order to address current social ills like the growing crime threat to our private welfare. And we have allowed an insatiably greedy private health care system to run wild without either economic or political constraint on its self interest, all at the expense of future public welfare.

That welfare is defined in terms of human capital--its quantity, quality and distribution--that require long term public and private investments. The reduction in social investments in human capital being made today cannot help but cripple the human capital base on which future social and private welfare depend.

Shares of State Spending by Function
FY1989 and FY1993



Postsecondary Education
OPPORTUNITY

The Mortenson Research Letter on Public Policy Analysis of Opportunity for Postsecondary Education

Number 32 | Iowa City, Iowa | February 1995

"I worked my way through college. You should too."

In October of 1993 the Census Bureau counted 13.9 million students enrolled in college, 8.3 million of whom were also employed. About six out of every ten college students were holding down jobs, over half of these full-time.

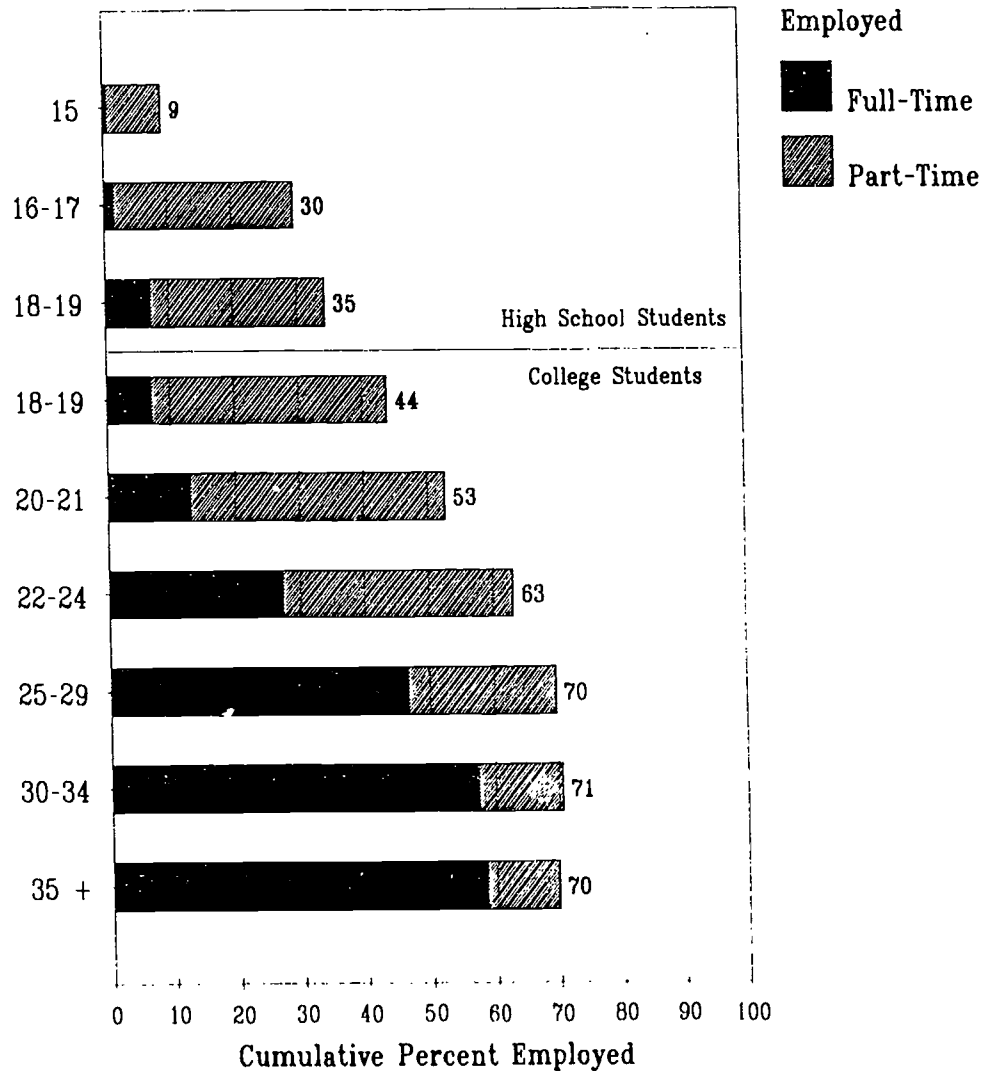
Here we examine employment data on college students from the Census Bureau's *Current Population Survey*, UCLA's annual *The American Freshman* survey, and other sources to explore the interaction between concurrent college enrollment and employment.

This examination was inspired by a legislative inquiry to the State of Washington Higher Education Coordinating Board a few years ago asking why students today couldn't work their way through college just like the legislator did in his youth. The answer is: most are trying to, but the disparity between the decreasing real minimum wage and increasing real college attendance costs places hours to be worked beyond human endurance.

Our findings are detailed in the analysis reported here. Among the highlights are these:

- *In 1993, 60 percent of all college students were also employed.*
- *Sixty-five percent of all college students were enrolled full-time. Forty-six percent of the full-time college students were also employed.*
- *Eighty-four percent of the part-time college enrollment was concurrently employed.*
- *An astounding 936,000 students or one in fifteen was both attending college full-time and was also employed full-time.* (Get a life already!)

Employment Rates of
High School and College Students by Age
1993

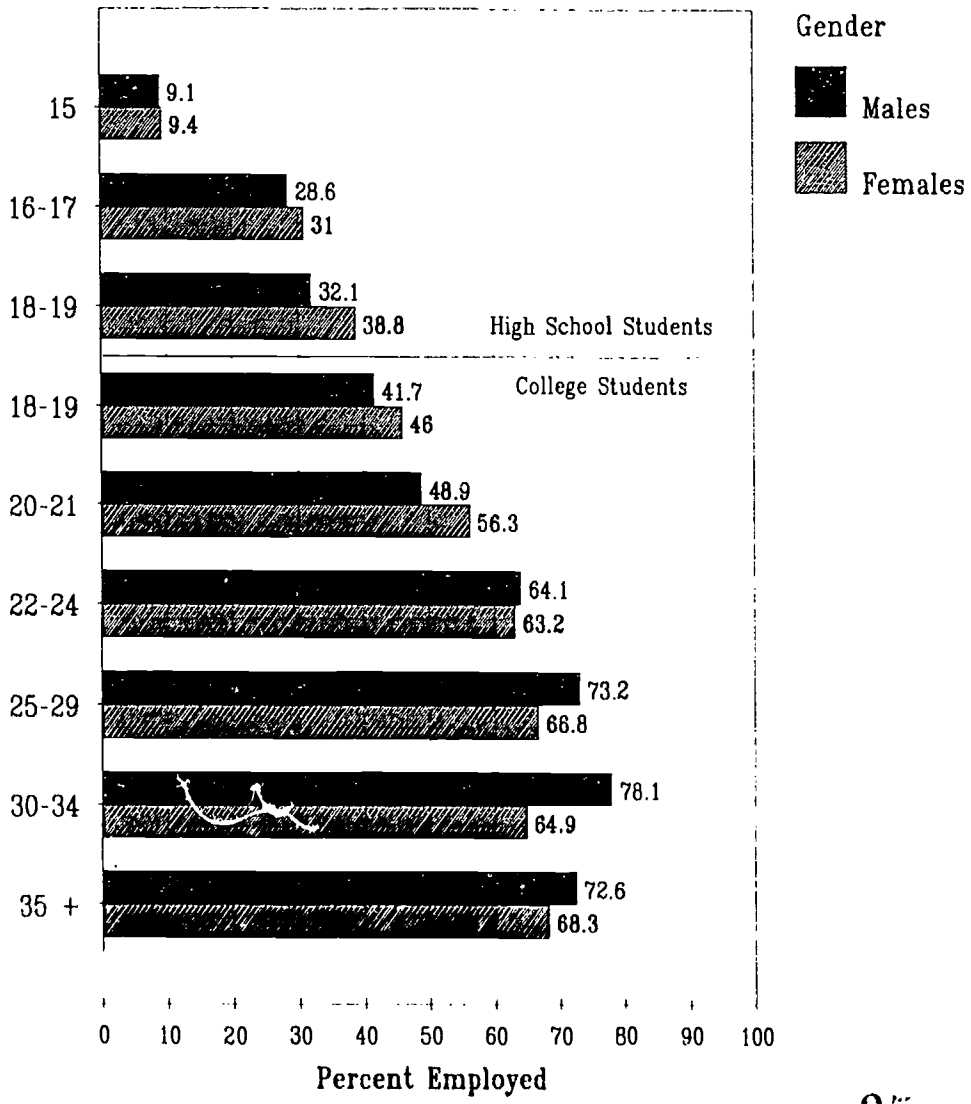


The Data Used

The data analyzed and reported here were drawn mainly from the Census Bureau's *Current Population Survey*. These data have been reported in annual reports since 1987. They permit descriptions of high school and college enrollment and employment by type of college, age, gender and race/ethnicity. We have also used data collected in the annual UCLA *Freshman Survey* since 1978 for more insight into on-and off-campus employment, and employment rates among freshmen by institutional type and control.

Bruno, R. R., and Adams, A. *School Enrollment-Social and Economic Characteristics of Students: October 1993*, U.S. Bureau of the Census, Current Population Reports, P20-479, U.S. Government Printing Office, Washington, DC, 1994.

Employment Rates of High School and College Students by Gender 1993



Definitions of full- and part-time enrollment and employment are about

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Mission Statement
This research letter is founded on two fundamental beliefs. First, sound public social policy requires accurate, current, independent, and focused information on the human condition. Second, education is essential to the development of human potential and resources for both private and public benefit. Therefore, the purpose of this research letter is to inform those who formulate, fund, and administer public policy and programs about the condition of and influences that affect postsecondary education opportunity for *all* Americans.

what one would expect. A full-time college student took twelve or more hours of classes during the average school week and the part-time student took less. A person employed full-time worked 35 or more hours per week while a person employed part-time worked one to 34 hours per week.

Age

The chart on the first page summarizes employment rates of students enrolled in high school and college by age cohorts.

The high school data are for full-time school enrollment only. At age 15, out of 3.3 million enrolled in high school, 289,000 were also working part-time and an additional 13,000 were reportedly working full-time. The employment rate was 9.3 percent.

At ages 16 and 17, the employment rate jumps to 29.7 percent, and for those 18 and 19 year olds still enrolled in high school the rate increases further to 34.6 percent.

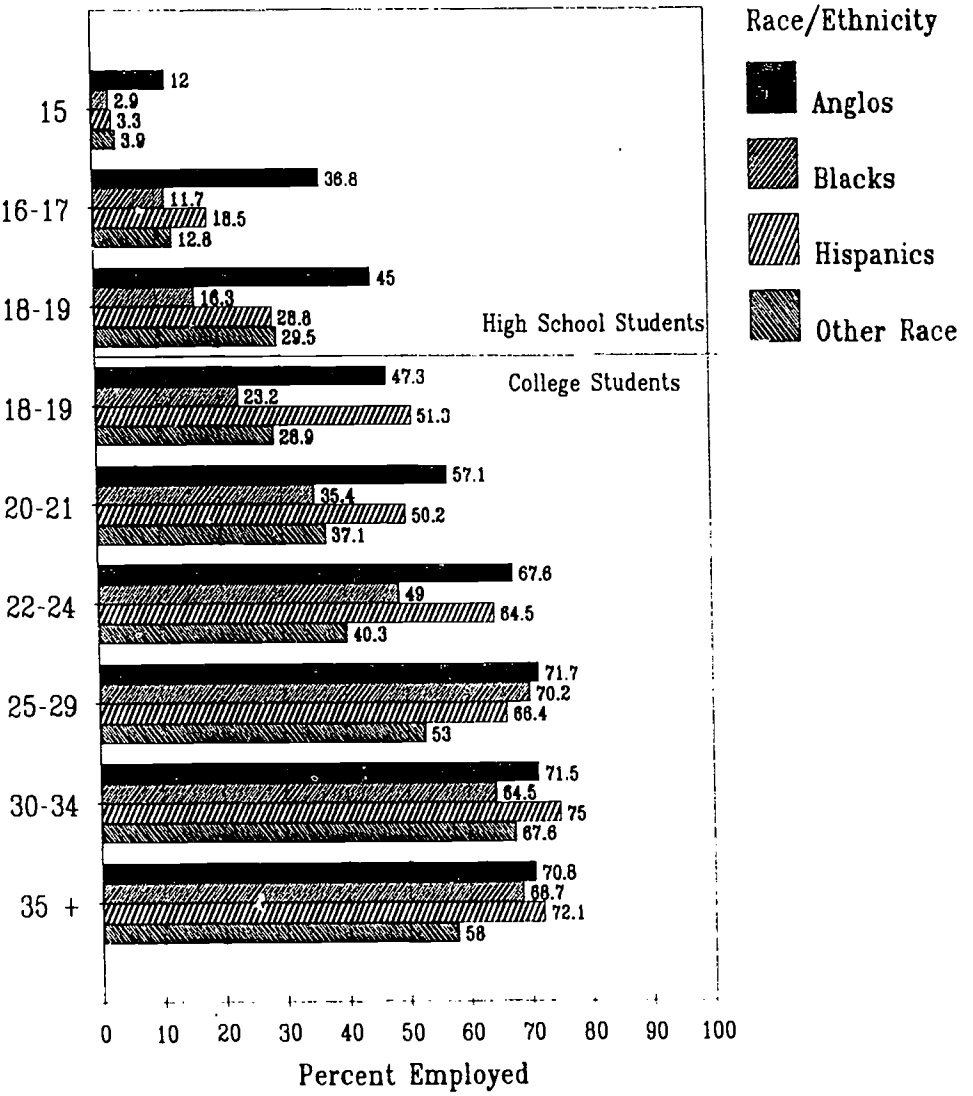
College enrollment begins for most students at age 18, although the Census Bureau found 123,000 15 to 17 year olds in college. We will skip this small group here.

Between the ages of 18 and 21 about half of all students work, but only about one in five who works is employed full-time. Beyond age 21, however, the proportion of students continues to increase while the proportion of those working full-time rises sharply. Beyond age 24, more than half of all students are also working full-time.

Gender

Males and females follow generally similar patterns of employment while enrolled in school or college. Less than ten percent of 15 year olds work,

Employment Rates of High School and College Students by Race/Ethnicity 1993



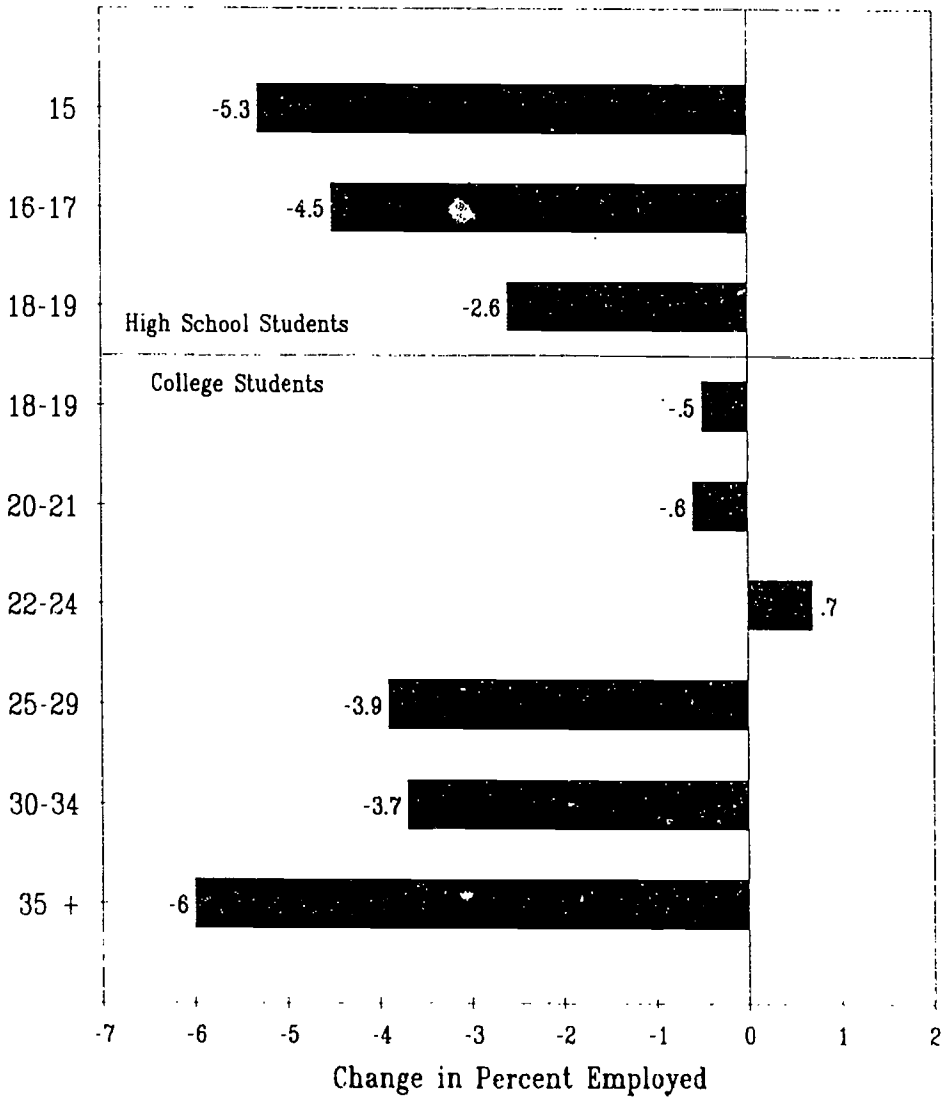
and this percentage rises with through age 25. From 25 years onward, about 70 percent of both males and females enrolled in college are also employed.

There is one interesting variant on this overall pattern. Female students are more likely to hold a job than are male students from age 15 through age 21. Between the ages of 22 and 24, male and female college students are about equally likely to be employed. But from age 25 onward, male college students are more likely than females to have a job while enrolled in college.

Race/Ethnicity

The Census Bureau publishes racial/ethnic data for the total population, whites, blacks and Hispanics. While these classifications are helpful, they both overlap and are incomplete. The ethnic data for Hispanics overlaps the racial data

Change in Employment Rates of High School and College Students by Age Between 1987 and 1993



because Hispanics may be of any race. The residual population is total population less whites and blacks.

We have reworked the data for these Census classifications into four classifications that are complete and avoid overlaps: Anglos (non-Hispanic whites), blacks, Hispanics, and other race (mainly Asians). We assume that all ethnic Hispanics are racially white, and that the other race residual is mainly Asian although American Indians are also included in this group.

The results--shown on page 3--reveal quite different rates of employment across racial/ethnic groups at most age levels. In high school Anglos are the most likely to work, both sooner and at a higher rate. By ages 18 and 19, about 45 percent of all Anglo high school students were working. By comparison the employment rates were about 29 percent for Hispanics and those of other race, and 16 percent for blacks.

In college Anglos and Hispanics were more likely to be employed than were blacks and other race between 18 and 24 years of age. After age 24 these differences were reduced, although those of other race were still somewhat less likely to be employed while enrolled.

Recent Changes in Employment Rates

The Census Bureau reports from the Current Population Survey begin reported employment data on high school and college students in 1987. Here we have compared and measured the changes in employment rates by age group between 1987 and 1993.

The results are clear and striking. High school students and college students 25 and over were less likely to be working in 1993 than they were in 1987. However, in the traditional college age population between 18 and 24 years of age, overall college students were about as likely to be working in 1993 as they had been in 1987.

We examined these data by gender and found a pattern we have come to expect in college enrollment data. Between the age of 18 and 21, in 1993 females were somewhat *more* likely to be employed than they were in 1987. The reverse was true for males: in this age range male students were *less* likely to be employed in 1993 than they were in 1987. These data are consistent with other labor force trend data that indicate an increasing labor force participation rate for females and declining rate for males.

The UCLA *Freshman Survey* offers some additional insight into employment trends among first-time, full-time college freshmen between 1978 and 1987. About 90 percent of these students are 18 to 19 years old.

Astin, A. W., Korn, W. S., Sax, L. J. and Mahoney, K. M. *The American Freshman: National Norms For Fall 1994*. American Council on Education and University of California, Los Angeles, December 1994.

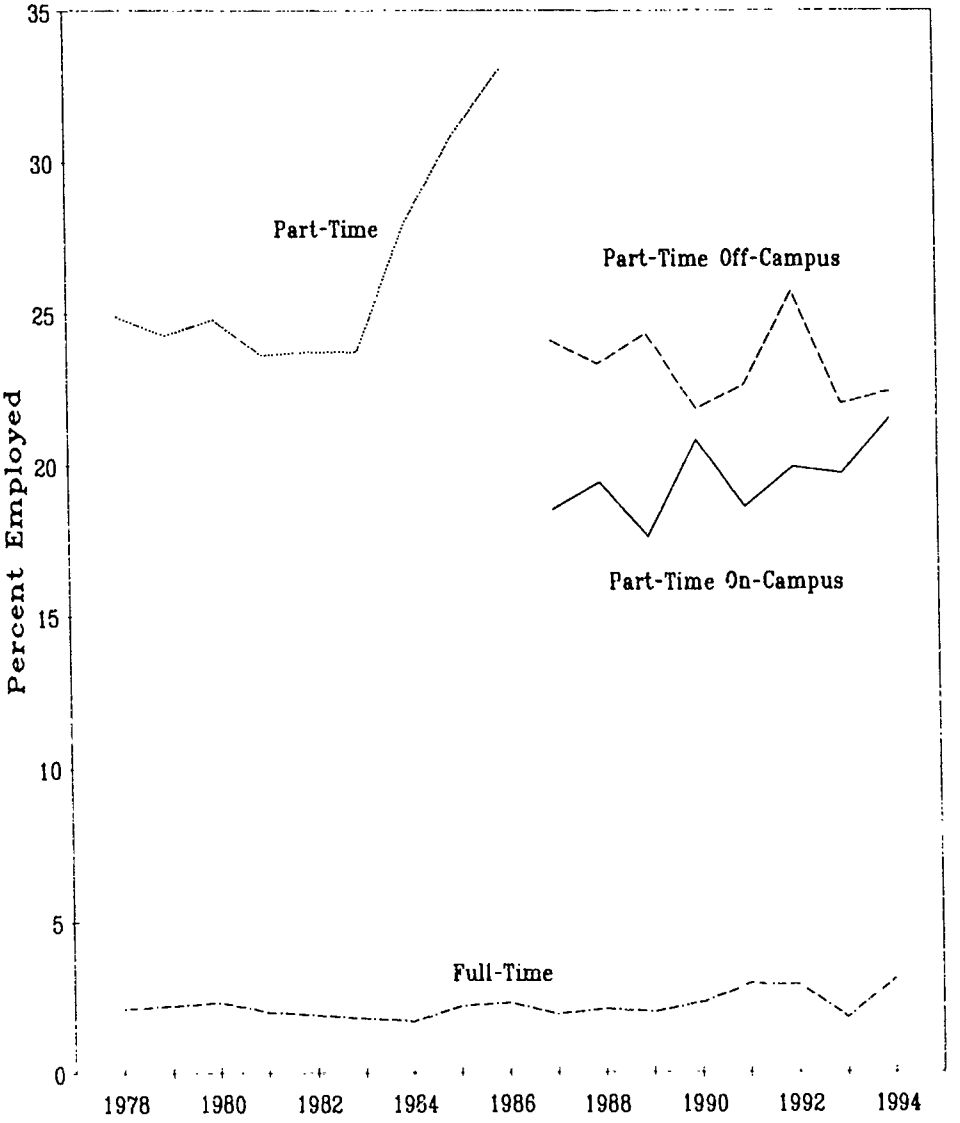
From 1978 to 1986 the survey asked only for part-time and full-time employment. Beginning in 1987 the survey asked whether part-time employment was on- or off-campus. While the disjuncture in this time-series distracts somewhat from our understanding of trends, there is solid information implied in the chart on this page.

First, part-time employment was quite stable at about 24 percent of all freshmen between 1978 when the employment question was first asked and 1983. Then, beginning in 1984 part-time enrollment started a rapid increase first to 28 percent, then to 31 percent in 1985 and 33 percent in 1986. Beginning in 1987 the data were collected separately for off- and on-campus employment.

Second, there is implied evidence in this chart that a fair number of freshmen were holding down part-time jobs both on- and off-campus at the same time. The 1987 Census Bureau reported part-time employment rate for full-time college freshmen ages 18 to 19 was 36.7 percent. The 1987 UCLA freshman survey reported combined on- and off-campus part-time employment of 42.6 percent. The difference of 5.9 percent is a fair estimate of the proportion of full-time college freshmen with part-time jobs both on- and off-campus.

Third, the UCLA freshman survey data indicate that the part-time employment rate for college freshmen declined by 1.7 percent off-campus between 1987 and 1994, but increased by 3.0 percent on-campus.

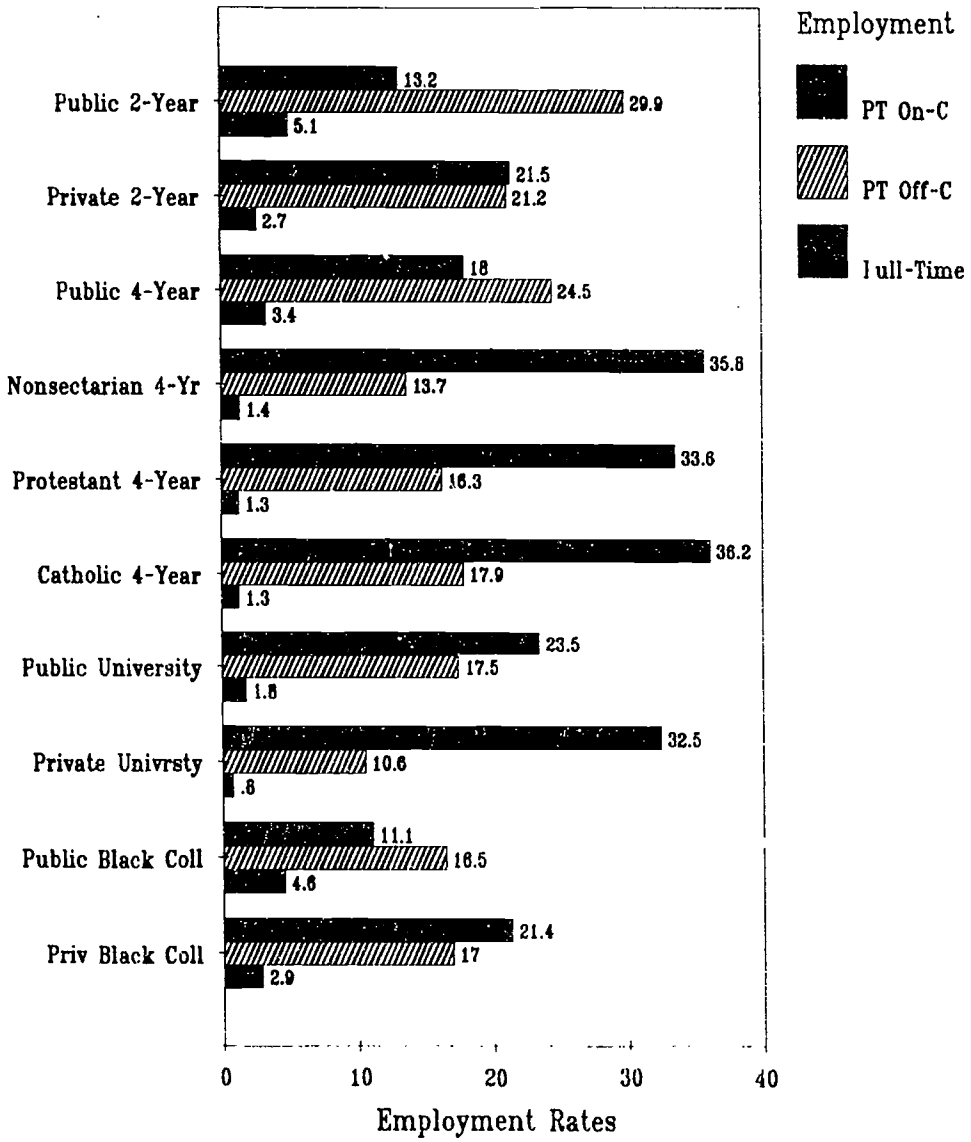
Freshmen Working While Attending College Full-Time 1978 to 1994



Finally, the UCLA freshman survey data indicate that the proportion of full-time college freshmen who are also employed full-time is low but increased beginning about 1991. Between 1978 and 1990 the proportion of these freshmen who were employed full-time fluctuated between 1.7 and 2.3 percent. But in 1991 it jumped to 2.9 percent, and by 1994 stood at 3.1 percent--the highest proportion in the 17 years that these data have been collected and reported.

(At this point we must point out a serious omission in the published data available for our analysis and presentation here. We are especially interested in employment rates by family income. We would expect employment concurrent with college enrollment to be driven substantially by financial need, and we would

Full-time Freshmen Employment Rates by Institutional Type and Control, 1994



expect students from lower income family backgrounds to be more often employed for this reason than would students whose family incomes are from the upper end of the family income distribution.

Both the Census and UCLA data are collected where cross-tabs would permit this description. B"t neither publish this as a part of their regular reporting. We wish both would do so.)

Institutional Type and Control

The UCLA *Freshman Survey* data also report employment rates by institutional type and control. These data also describe types of employment, as shown in the above chart.

Patterns of employment among full-time college freshmen vary significantly between different types of colleges and universities.

- The students most likely to be employed part-time on-campus are found in private colleges and universities. The students least likely to be employed part-time on-campus are at public 2-year and black colleges.
- The students most likely to be employed part-time off-campus are found at public 2-year and 4-year colleges. Those least likely to be employed part-time off-campus are found at private universities and 4-year colleges and public and private black colleges.
- Freshmen most likely to be employed full-time are enrolled at public 2-year and black colleges. Those least likely to be employed full-time are enrolled at universities and private 4-year colleges.

Working One's Way Through College

We now return to that Washington legislator's suggestion that a hard working student should be able to work his or her way through college, just like he did many years earlier.

For this analysis we combine time-series data on college attendance costs with minimum wage data to illustrate how many hours a full-time student would have to work each week to pay for each week's direct and indirect college attendance costs.

Our college attendance costs are calculated for students living on campus at average cost public and private 4-year institutions. These costs include direct costs (tuition, fees, books and supplies) plus indirect costs (food, housing, transportation, personal and medical care). We have combined data on institutional charges collected by the National Center for Education Statistics through the IPEDS survey, with the broader measure of college budgets collected and published by The College Board. For 1993-94 the average nine-month

college budgets calculated by this method were $8582 at public 4-year institutions, and $17,846 at private 4-year institutions.

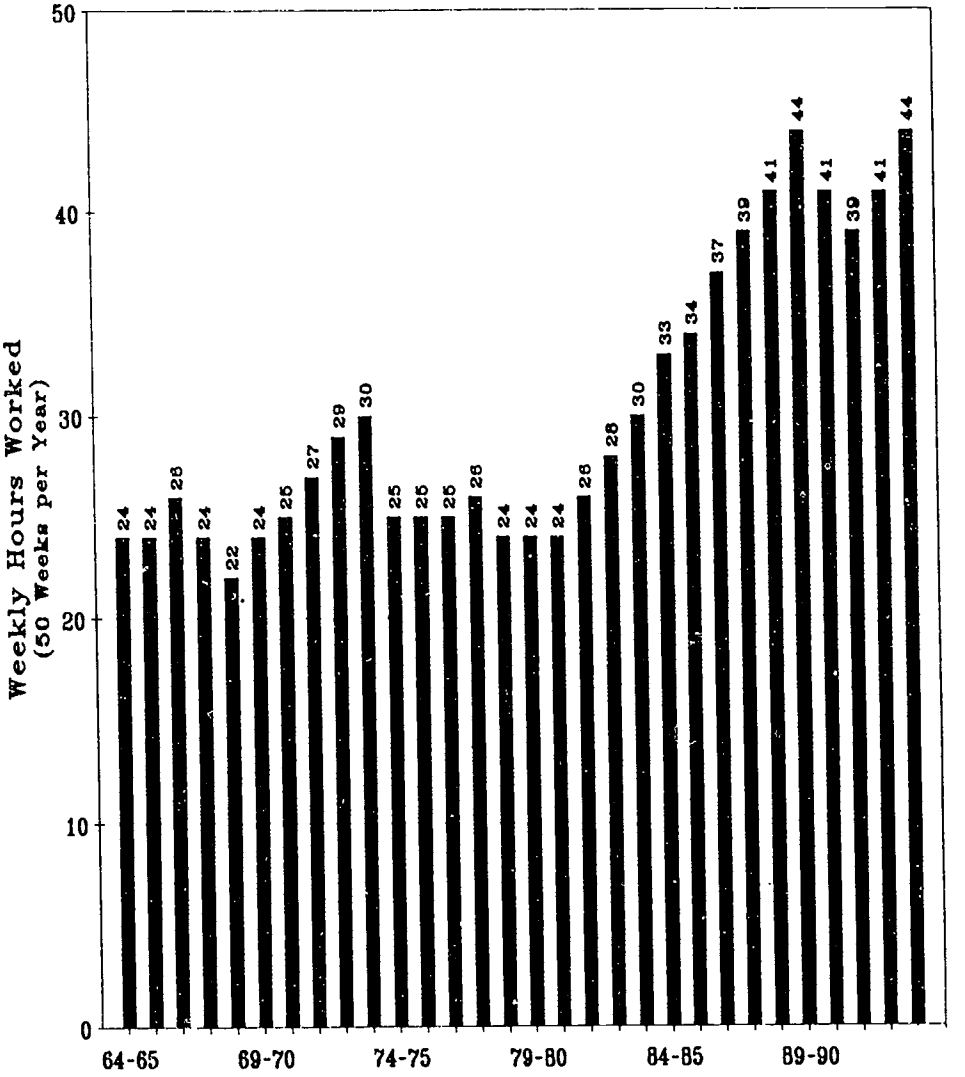
Our earnings component is based on the federal minimum wage, less the OASDI employee tax. We assume that the student works 50 weeks per year at the minimum wage, and saves all that he or she earns (less OASDI) to finance the college budgets calculated above.

We have made these calculations for each academic year from 1964-65 (when NCES first collected institutional charges data) through 1993-94. The results are shown for public 4-year colleges on this page, and private 4-year colleges on the following page.

For a full-time student working his or her way through an average cost public 4-year college or university, from the mid-1960s through 1981-82, the student would have had to work about 25 hours per week, 50 weeks per year, to finance his or her college budget exclusively from earnings. Then, beginning with the 1982-83 academic year the number of hours worked per week starts to rise to 28 hours. By 1984-85 it's up to 33, and five years it reaches 44 hours per week. By 1993-94 it has returned to 44 hours per week.

Two things are happening here, and both begin about 1980. The first is the declining purchasing power of the minimum wage, both due to inflation increasing faster than the hourly wage after 1978 and steady increases in the OASDI tax rate that leaves less take-home pay. The second is the cost shift from taxpayers to students in the refinancing of higher education as state tax resources are diverted to corrections and Medicaid and students are charged higher tuitions to replace these lost institutional revenues. The result is a nearly doubling of the hours

Weekly Hours Worked at Minimum Wage to Finance Public 4-Year College Attendance Costs 1964-65 to 1993-94

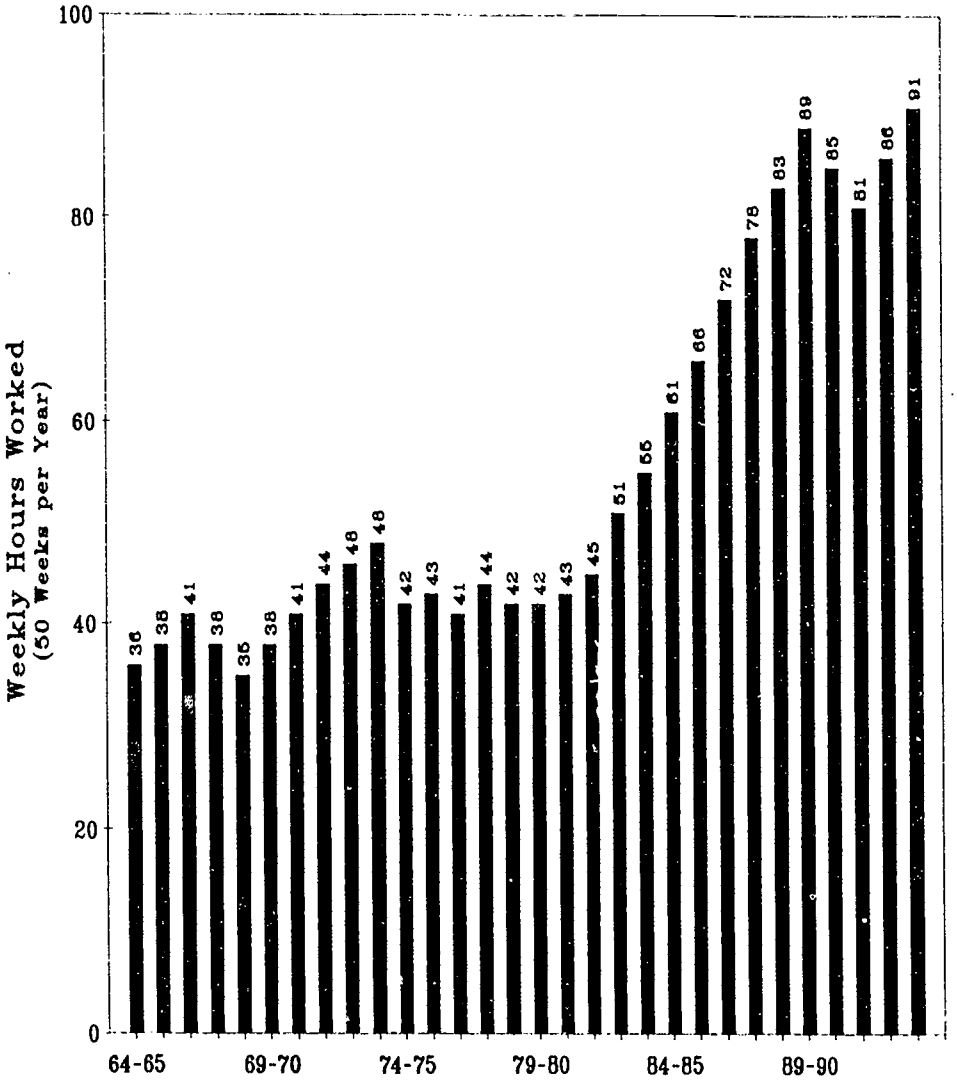


required to finance average public 4-year college budgets from earnings alone in just the ten year period from 1981-82 to 1989-90.

A far harsher picture emerges for students enrolled in average cost private 4-year colleges and universities. In the later half of the 1960s a student would have had to work between 35 and 40 hours per week to finance his or her college budget from earnings alone. During the 1970s this rose to 40 to 45 hours per week.

Then beginning in 1982-83 things really took off to 51 hours. By 1984-85 hours worked to finance the college budget rose to 61 hours, and to 89 hours per week by 1989-90. For 1993-94 it had risen to 91 hours per week, 50 weeks per year, to pay for college out of minimum wage earnings alone.

Weekly Hours Worked at Minimum Wage to Finance Private 4-Year College Attendance Costs 1964-65 to 1993-94



Obviously these conditions are not manageable by students seeking to squeeze the most out of their higher education experiences in courses and campus life. Apparently some are trying, but the story we hear from the campuses is that students who work full-time while attending college full-time too often doze off in class.

Summary

College is an increasingly important and necessary transition from youth to adulthood. During these same years young adults also move from economic dependence to independence. It is not surprising that we should observe these two transitions overlapping in ways that are mutually supportive and also conflicting.

Man has yet to figure out how to squeeze more than 24 hours into a day, although evidence presented here suggests nearly a million full-time college students are also employed full-time. They appear to be trying to stretch the 24 hour day to accommodate two full-time lives in one space of time.

The merits of employment while studying are obvious.

- Employment provides an important source of money that is available to help finance college attendance costs. These earnings can reduce educational debt burdens that many students face after college. Work-study employment is often included in the package of financial aid that needy students receive to attend college.
- Employment also introduces youth to the world of work with its distinctive expectations and rigors that youth may not have known before. For some students, this may be the first employment experience with a new set of learning outcomes, or may put academic coursework into a new perspective, or may offer a wedge of opportunity into post-collegiate careers.

But the conflicts between academic and employment demands cannot be overlooked either. Pascarella and Terenzinis' 1991 synthesis of the research on employment and academic success found that off-campus employment had a distinctly negative effect on year-to-year persistence and bachelor's degree attainment. Some research suggested that the greater the number of off-campus hours worked, the greater was the negative effect of off-campus employment on academic success.

However, part-time employment on-campus had positive effects on year-to-year persistence, bachelor's degree attainment, timely graduation and probability of enrolling in graduate or professional school. The interpretations of these findings follow from the sociological theory of on-campus employment enhancing college involvement and integration.

The Cost Shift to Students ... *. . . Accelerates*

Updating the Refinancing of Higher Education through the National Income and Product Accounts

With the 1993 updates and revisions to the National Income and Product Accounts of the United States, we update and revise our previous reports on the cost shift from taxpayers to students. The results are surprising only because previously reported trends appear to have accelerated in the most recent NIPA revisions and extensions.

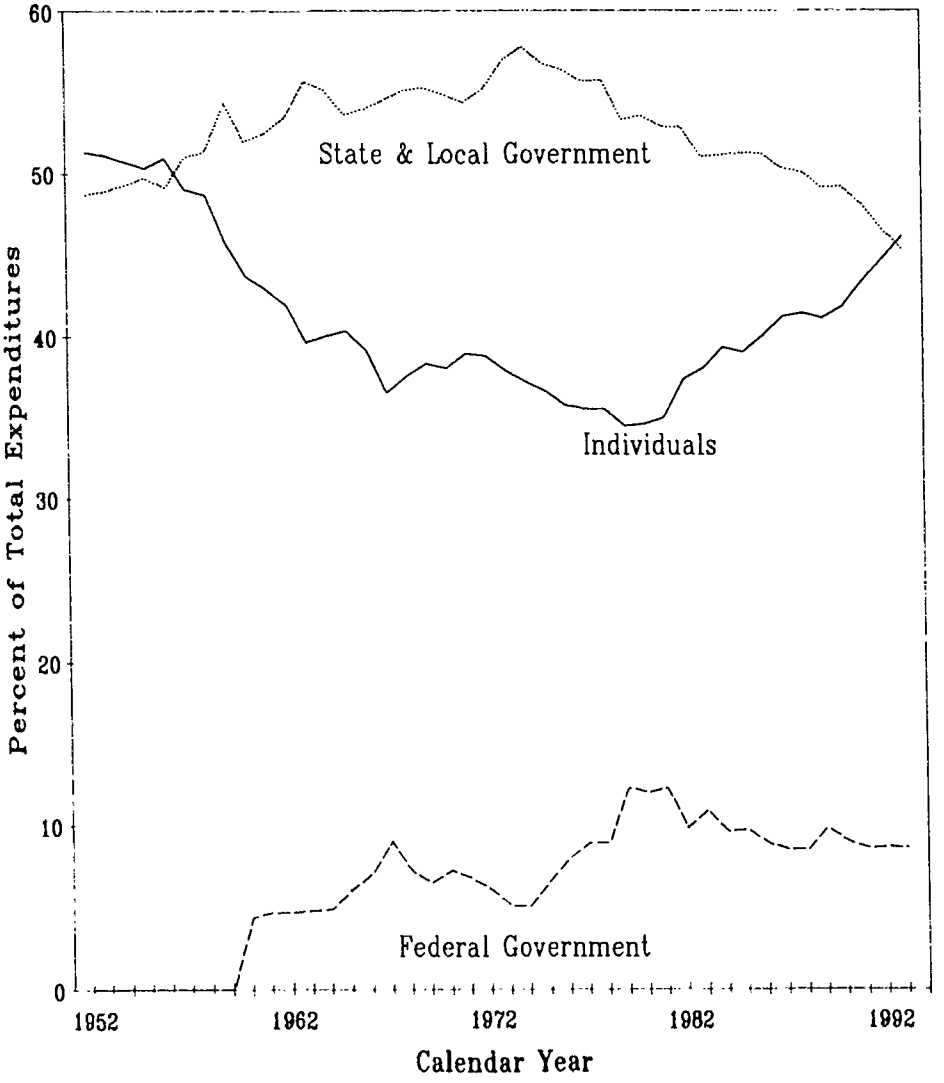
In 1993, for the first time since 1956, students paid for a larger share of their higher educations than did state and local government taxpayers. In 1993 institutional charges to students produced $56.1 billion for public and private higher education, while state and local governments provided $55.1 billion.

- *The share of higher education's revenues provided by students was the largest since 1958.*
- *The share provided by state and local governments was the smallest provided ever.*

As the chart on this page suggests, the cost shift from taxpayers to students--especially at the state level--has accelerated during the last three years.

The cost shift from taxpayers to students has added by 1993 about $14.2 billion to the costs of higher education borne by students, and decreased the burden to taxpayers by $14.2 billion, compared to the 1979 distribution of responsibilities for paying for higher education. Of the $14.2 billion reduction in taxpayer investment in higher education, about $4.5 billion occurred at the federal level and about $9.8 billion occurred at the state and local government level.

Distribution of Responsibilities for Financing Higher Education 1952 to 1993



NIPA Accounting

Our data for this analysis is produced by the Department of Commerce' Bureau of Economic Analysis, and are published over several summer and fall issues of the monthly *Survey of Current Business*. These data were first published in 1942 as national income statistics.

The NIPA data describe the market value of goods and services produced each calendar year in the U.S. economy. From these data Gross Domestic Product estimates of national

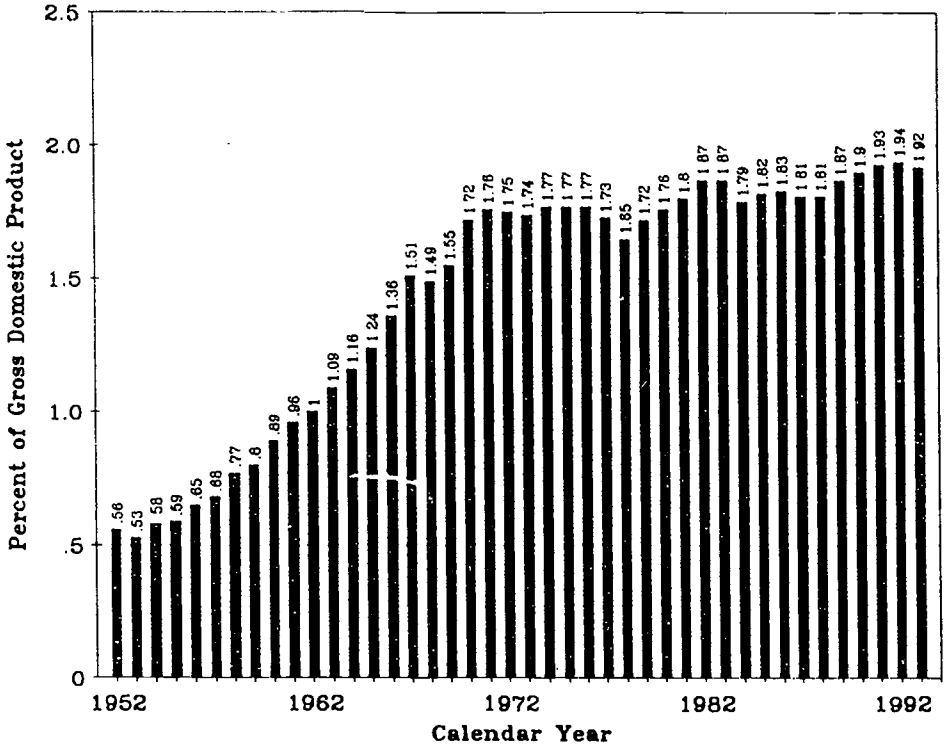
economic activity are produced. Our analysis here updates previous reports based on these data that appeared in the January and August 1994 issues of **OPPORTUNITY**. These data were taken from tables in the series on national product and income, personal income and outlays, and government receipts and expenditures.

The particular value of the NIPA accounting of expenditures for higher education is that it illustrates over a period of more than 40 years how the efforts of the different parties responsible for funding higher education have made their respective contributions to the total funding picture. The results show that responsibilities have continuously shifted over time, first from students to state government, then briefly to the federal government, and since 1979 back to students and their families. The trends in place for the last 15 years show no signs of abating, and in fact may be accelerating.

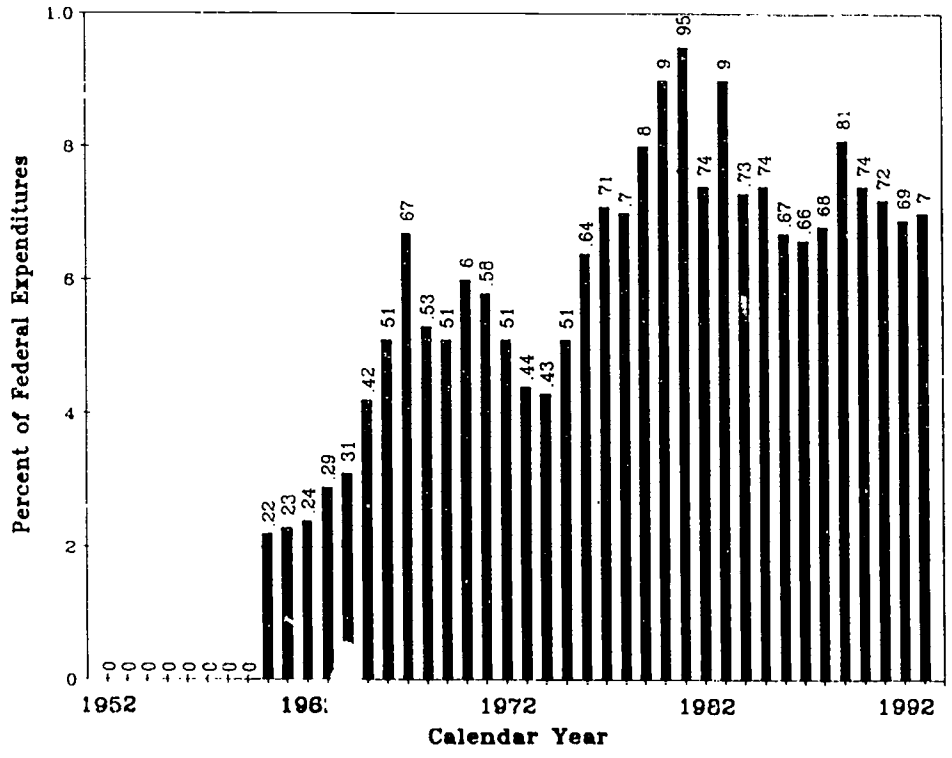
There are important undocumented definitions in the NIPA accounting of higher education expenditures:

1) Expenditures for public and private higher education are combined. This is especially important in reviewing federal government expenditures and personal consumption data.
2) Personal consumption is the revenues received by institutions for tuition and fees.
3) Federal expenditures are mainly for student financial aid and incidentally for direct institutional support for public institutions located in the District of Columbia. The student financial aid lines include expenditures for Pell Grants, federally funded campus based programs and guaranteed loan interest subsidies and other loan program costs.
4) State and local government expenditures are appropriated sums for institutional operations.

Higher Education's Share of
Gross Domestic Product
1952 to 1993



Higher Education's Share of
Expenditures of the Federal Government
1952 to 1993



Excluded from these accounts are auxiliary enterprises (dorms, food service, book stores, athletic events), hospitals, externally funded research and extension services. What remains are the core activities of higher education: instruction, internally funded research and community service.

Total Expenditures

The NIPA accounts report total expenditures of $121.7 billion for higher education in CY1993. Of this total, $56.1 billion was provided by students and their families, $55.1 billion by state and local governments, and the balance of $10.5 billion by the federal government.

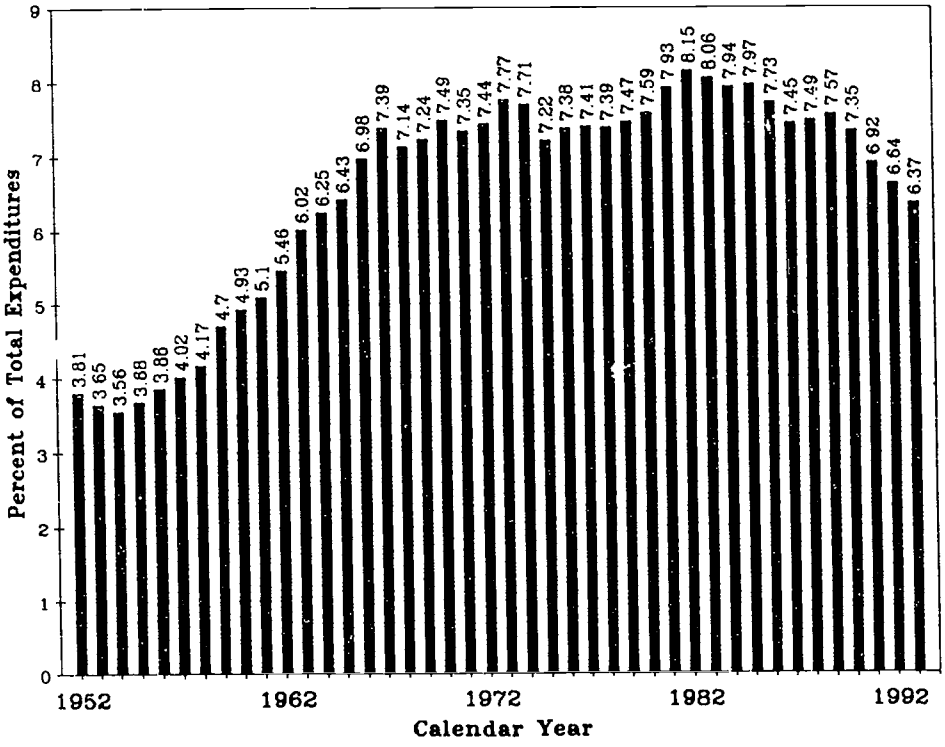
To put these numbers in a context that is useful for understanding total social investment in the higher educations of students, this was 1.92 percent of Gross Domestic Product in 1993, as shown on page 10. Over the 40 years of NIPA data, higher education's share of GDP grew smartly from 0.55 percent of GDP in the early 1950s to 1.76 percent by 1971. Since then it has edged up only slightly to a peak of 1.94 percent in 1992, and by 1993 stood at 1.92 percent of GDP.

Federal Expenditures

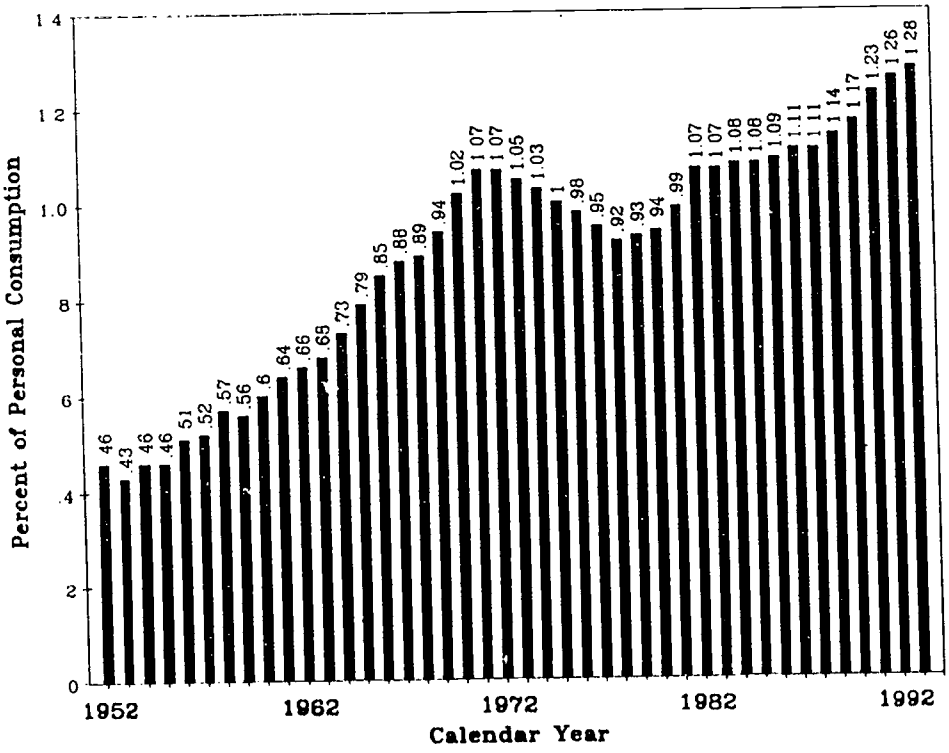
The contribution of the federal government to higher education as defined in NIPA begins in 1960 with the advent of federal student financial aid programs. From zero in 1959, the share of federal expenditures for higher education increased to a peak of 0.95 percent in 1981. It then quickly dropped back to about 0.7 percent of all federal expenditures where it has remained through 1993.

As a proportion of the total funding effort for higher education, the federal government's share increased from zero in 1959 to a peak of 12.3 percent in 1979 and 1981, and has since

Higher Education's Share of Expenditures of State and Local Governments 1952 to 1993



Higher Education's Share of Personal Consumption Expenditures 1952 to 1993



dropped back to about 8.6 percent of total funding from 1986 through 1993.

State and Local Governments

Between the mid-1950s and 1992 state and local governments provided more funding for higher education than did students and their families. As a proportion of all funding, the state and local government share grew from about 49 percent in the early 1950s to a peak of 57.7 percent in 1974, and has declined ever since. By 1993 it had dropped to 45.3 percent of all funding, the smallest share at any point in the 42 years of NIPA data.

Expressed as a proportion of all expenditures of state and local government, higher education's share increased from about 3.5 percent in the mid-1950s to a peak of 8.15 percent in 1982. By 1993 higher education's share of state and local government expenditures had dropped off to 6.37 percent, or the lowest share of state and local government expenditures in nearly 30 years.

Personal Consumption

The NIPA accounts classify tuition and fee charges to students as personal consumption. We prefer to think of higher education as a personal investment because it pays returns over the lifetime of the student.

In 1993 tuition and fees paid by students were $56.1 billion. For the first time since 1955 students paid a larger share than did state and local governments. Between 1952 and 1979 the student share declined steadily and substantially, from 51.3 percent to 34.4 percent. But beginning in 1980 this reversed, and by 1993 the student share had risen to 46.1 percent.

The share of personal consumption devoted to higher education has grown from about 0.45 percent in the early 1950s to 1.28 percent by 1993. Since 1979 alone, when the share borne by federal, state and local governments has dropped, the proportion of personal consumption paid by students has increased from 0.93 to 1.28 percent of personal consumption.

The Cost Shift to Students

Using 1979 as a reference point, by 1993 students were paying $14.2 billion more for their higher educations than they had fourteen years earlier. Taxpayers were paying $14.2 billion less. Federal taxpayers were paying $4.5 billion less, and state and local government taxpayers were paying about $9.8 billion less.

The federal shift is a result of replacing grants to students with educational loans, and within the loan programs shifting loan program costs further to students. (The current discussions about capitalizing in-school interest subsidies are an extension of the cost shift from federal taxpayers to students that began in the mid-1970s.) Loans *presumably* cost the federal government less than do grants, but cost student borrowers more.

The state shift is the direct result of tax monies previously allocated to public higher education institutions being diverted to Medicaid and corrections in state budgets, with institutions left to raise tuition and fee charges to students to make up for the lost revenue. We have seen solid evidence that the much higher tuition and fees charged students in public higher education have produced no net revenue gain for public institutions. In fact, the long list of losses in quantity and quality of higher educational opportunity for students in public institutions indicates that the cost shift to students has not been fast enough to prevent erosion of higher educational opportunity during the last 15 years.

In our previous enrollment reports (see June 1994 issue of **OPPORTUNITY**) we have shown that higher educational opportunity grew more equal across levels of family income in the 1970s. Then, beginning in 1980, higher educational opportunity has grown less equal. By 1993 higher educational opportunity had become more unequally distributed across family income levels than it has been at any time since 1970 when the Census Bureau began reporting the data used to make these calculations.

We believe the cost shift from taxpayers to students has directly caused this growing inequality of higher educational opportunity across levels of family incomes of students. We all learned in our first economics class that if the price of a good or service is raised, all other things being equal, people will buy less of it. In fact there are 40 years worth of consistent findings from econometric research on student demand for higher education that yield this same conclusion: raising prices decreases student access, choice and persistence, and lowering prices increases student access, choice and persistence.

The manner of the cost shift from taxpayers to students has been handled extraordinarily clumsily by the federal government and nearly all state governments. The cost shift has treated all students as if they were equally capable of shouldering an increased share of the costs of their own education. That simply is not true. Some students--mainly from the top quartile of family income, above about $65,000 per year--have handled the cost shift well. Farther down the income scale, however, higher educational opportunity has been deteriorating since 1979 when the cost shift began.

Public budgeting for higher education has been driven by budget concerns: obsessed with deficits, oblivious to program objectives, and ignorant and uncaring about the effects on opportunity for postsecondary education for our most vulnerable and dependent populations.

A State Perspective on Income and Educational Attainment

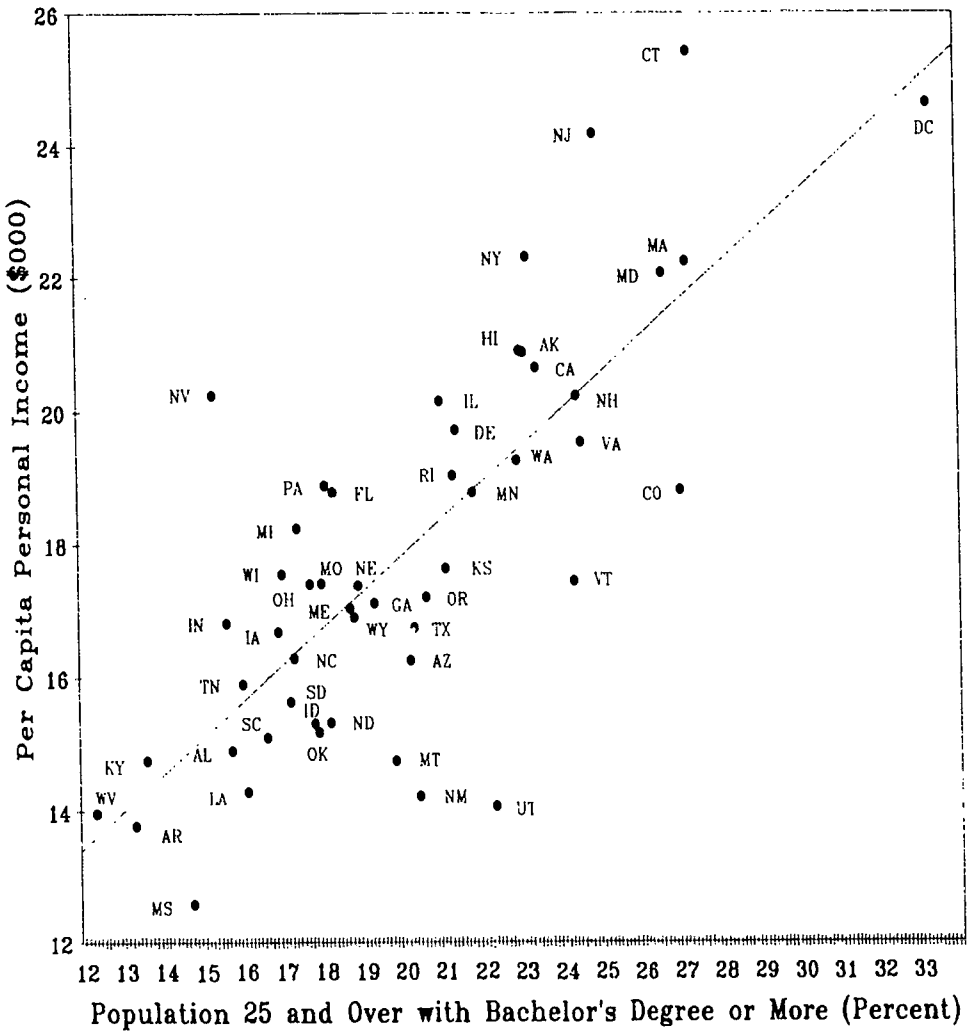
A consistent theme of the labor market analyses reported in **OPPORTUNITY** is that people with higher levels of educational attainment are better off than are other people with lesser levels of educational attainment. Mainly our analyses and reports have focused on the relationship between educational attainment and the incomes earned by heads of families, males and females, persons from different racial/ethnic groups, people at different ages and by people in each of the 50 states.

Here we extend these analyses to examine the relationship between the educational attainment of the adult population of each state and state per capita personal income. We find that states with larger proportions of their adult population with baccalaureate degrees tend to have higher per capita personal incomes, and states with relatively low proportions with college degrees tend to have relatively low per capita personal incomes.

Data on the educational attainment of those 25 years and over in each state were published by the Census Bureau in January of 1994 under the title *1990 Census of Population: Education in the United States*. We calculated from the published data the proportion of each state's population 25 and over that had attained a bachelor's degree or more. The results ranged from 12.3 percent of the population of **West Virginia** to 33.3 percent of the population of the **District of Columbia**.

The data on state per capita personal income for 1990 were prepared by the Bureau of Economic Analysis and published in issues of the monthly *Survey of Current Business*. For 1990 state per capita personal income ranged from $12,578 in **Mississippi** to $25,426 in **Connecticut**.

State Per Capita Personal Income
as a Function of Educational Attainment of Adults
1990



The results are shown in the above scatter plot, with a regression line plotted through the data points. Each one percent gain in the proportion of the population 25 and over with a baccalaureate degree adds about $590 to state per capita personal income.

States interested in improving the well being of their populations as measured by per capita personal income must consider the relationship between income and education in their adult workforce. States face three strategies to improve educational attainment, income and the living standards that education and income produce: 1) states can grow their own college educated adults, 2) states can seek to attract college educated adults educated elsewhere, and/or 3) states can discourage adults without college education from living in their states.

President Clinton's Tuition Tax Deduction: Badly Misdirected to Meet Financial Need of Students

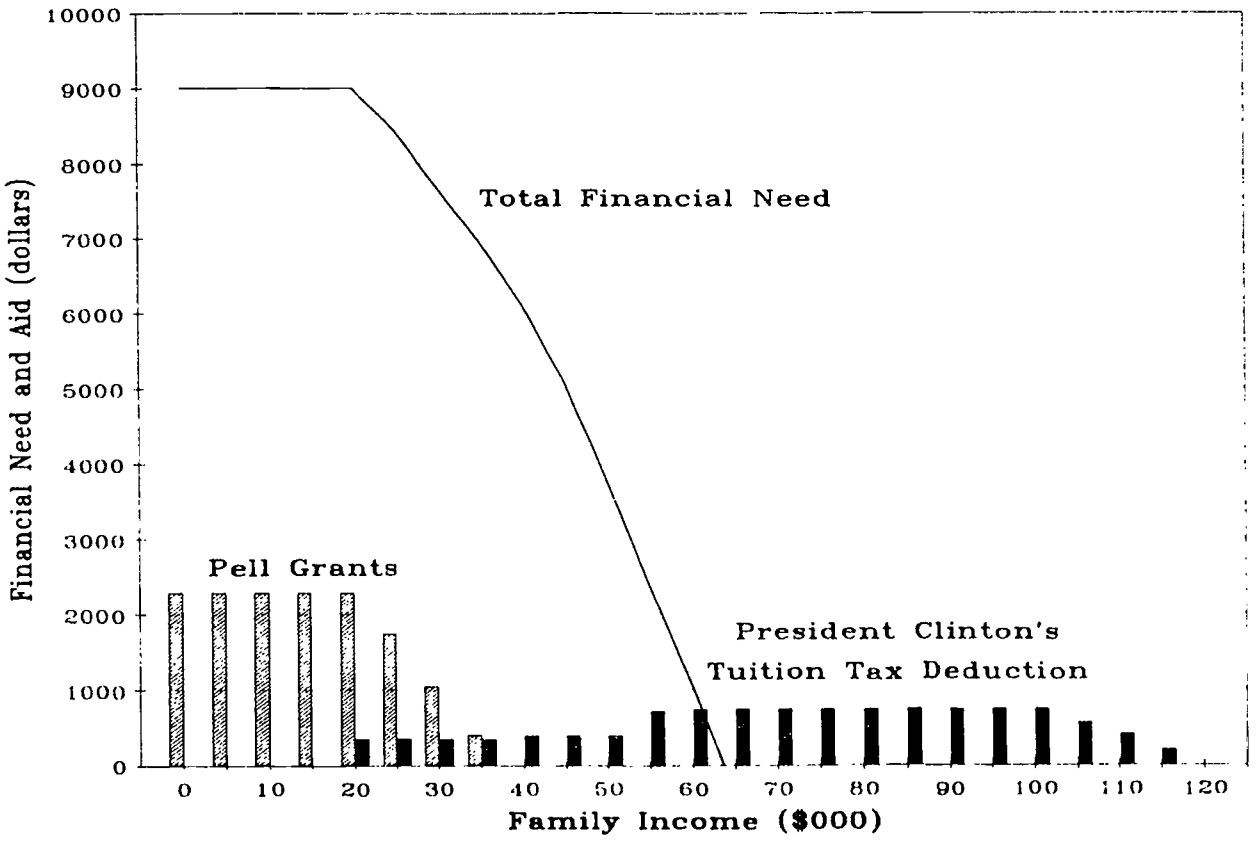
On December 15, 1994, President Clinton proposed a new federal student financial aid program: a tuition tax deduction of up to $10,000 per year for federal income tax payers with incomes up to $120,000 per year. From initial press reports, the President's proposal appeared to be geared toward upper income families and in fact could provide financial aid well beyond the need for financial aid as calculated under the Federal Methodology. Because our analyses reported in past issues of ***OPPORTUNITY*** *lead us to believe that this group is the least financially needy and is currently doing best in access, choice and persistence, we decided to examine the President's proposal in some detail to see who the beneficiaries are intended to be.*

The results of our analysis (and the insights of others) lead us to a set of mixed conclusions regarding the proposal:

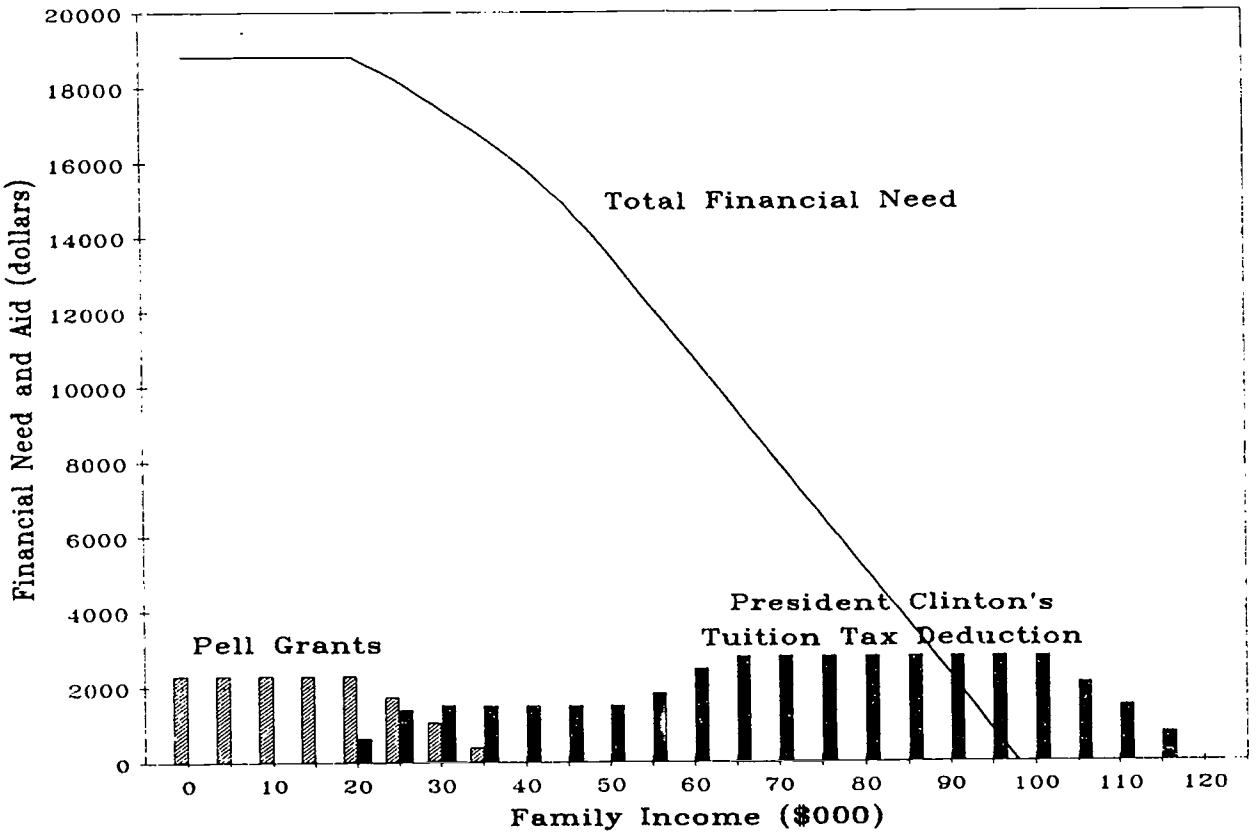
- At the lower end of the family income range where benefits are produced, the tuition tax deduction meets financial needs by replacing loans with grant-like assistance.
- At the upper end of the family income range, federal tax benefits are provided far beyond financial need as measured by the Federal Methodology enacted in the 1992 Education Amendments.

On balance, we conclude that President Clinton's tuition tax deduction is a bad idea because it so badly misses the populations that are truly needy and have been ignored for the last 15 years, and because it provides gift aid beyond financial need at the upper income ranges where benefits would be provided.

Distribution of Financial Need, Pell Grants and Clinton Tuition Tax Deduction by Family Income in Public 4-Year Colleges and Universities



Distribution of Financial Need, Pell Grants and Clinton Tuition Tax Deduction by Family Income in Private 4-Year Colleges and Universities



Clinton's Tuition Tax Deduction

In December President Clinton proposed a federal income tax deduction of up to $10,000 per year for amounts paid by taxpayers for tuition and fees for postsecondary education for themselves, their spouses and their dependents.

- The tuition tax deduction would be available to families with incomes up to $120,000 per year, although it would be ratably reduced to zero between $100,000 and $120,000 of family income.
- The deduction would be phased in with a $5000 limit in 1996, rising to $10,000 in 2000 and later years.
- The deduction would occur "above the line"--it would occur on the federal tax form prior to the determination of taxpayer's adjusted gross income. This preserves the tuition tax deduction benefit for those who do not itemize deductions as well as those who do.

The Treasury Department's Office of Tax Analysis estimates that the cost of the tuition tax deduction would be $20.6 billion for the fiscal years 1995 to 2000 during phase in. The proposal is further reported to reduce federal revenues by $40.1 billion for the fiscal years 2001 to 2005 by the Congressional Research Service. When fully implemented, the tuition tax deduction would reduce federal revenues by about $8 billion per year. (By comparison, the federal government spends $6.2 billion per year on the Pell Grant program for students from low income families.)

Missing the Target

Since 1979, the distribution of higher educational opportunity across levels of family income has grown ever more unequal. Students whose family incomes place them in the top quartile of family income--above about $65,000 per year--are doing extraordinarily well in high school graduation, college participation, and 4-year college completion by age 24. Students from the two middle family income quartiles--between about $20,000 and $65,000 per year--are clearly struggling. Students from families with incomes in the bottom quartile--below $20,000 per year--are doing very poorly. The bottom quartile group is the only income quartile whose chances of graduating from college by age 24 actually

declined between 1979 and 1993.

In 1993 an estimated 60 to 65 percent of all baccalaureate degrees awarded by age 24 went to students from the top quartile of family income. About 25 percent went to students from the third quartile. About ten to 15 percent went to students from the bottom half of the family income distribution. In 1993 higher educational opportunity had become more unequally distributed across quartiles of family income than it has been at any time since 1970 when the Census Bureau began reporting the data on which these calculations were prepared.

President Clinton's tuition tax deduction proposal is focused mainly on the top quartile of family income, or exactly the population least in need of further financial assistance to attend college. It does nothing at all for those from the bottom quartile who have been falling farther and farther behind over the last 15 years.

Financial Aid Beyond Need

As the two charts accompanying this analysis illustrate, the President's tuition tax deduction provides federal income tax reductions of up to $2800 to families that have no financial need for this tax benefit under the Federal Methodology of need analysis. That is to say, these high income families produce an expected family contribution from the federal need analysis that exceeds the cost of sending their children to college. They are not financially needy and would otherwise not qualify for a dime of federal need-based student financial aid.

However, receipt of the tuition tax reduction benefit is not contingent on demonstrated financial need as would receipt of a federal Pell Grant, for example. Thus beginning at about $65,000 of family income in public 4-year institutions, and at about $100,000 in private 4-year institutions, the tuition tax credit amounts to financial aid beyond demonstrated financial need.

If the deterioration in the financial aid system for low and middle income students since 1979 were not so serious, then giving money to wealthy families who do not need it under federal guidelines would not be so troubling as is the tuition tax deduction proposal. But the federal Pell Grant for the lowest income students has been so badly neglected that it now buys only about 40 percent of what it bought in higher education in the late 1970s.

The President's tuition tax deduction would be a bad idea in better times. There are far more important ways to spend the $8 billion per year it would cost. If such funds were actually available, we would recommend they be spent on truly needy students through the Pell Grant program.

Postsecondary Education
OPPORTUNITY

The Mortenson Research Letter on Public Policy Analysis of Opportunity for Postsecondary Education

Number 33 | Iowa City, Iowa | March 1995

Surprise, kids! *Parents do matter!*

Parental Educational Attainment and Chance for College

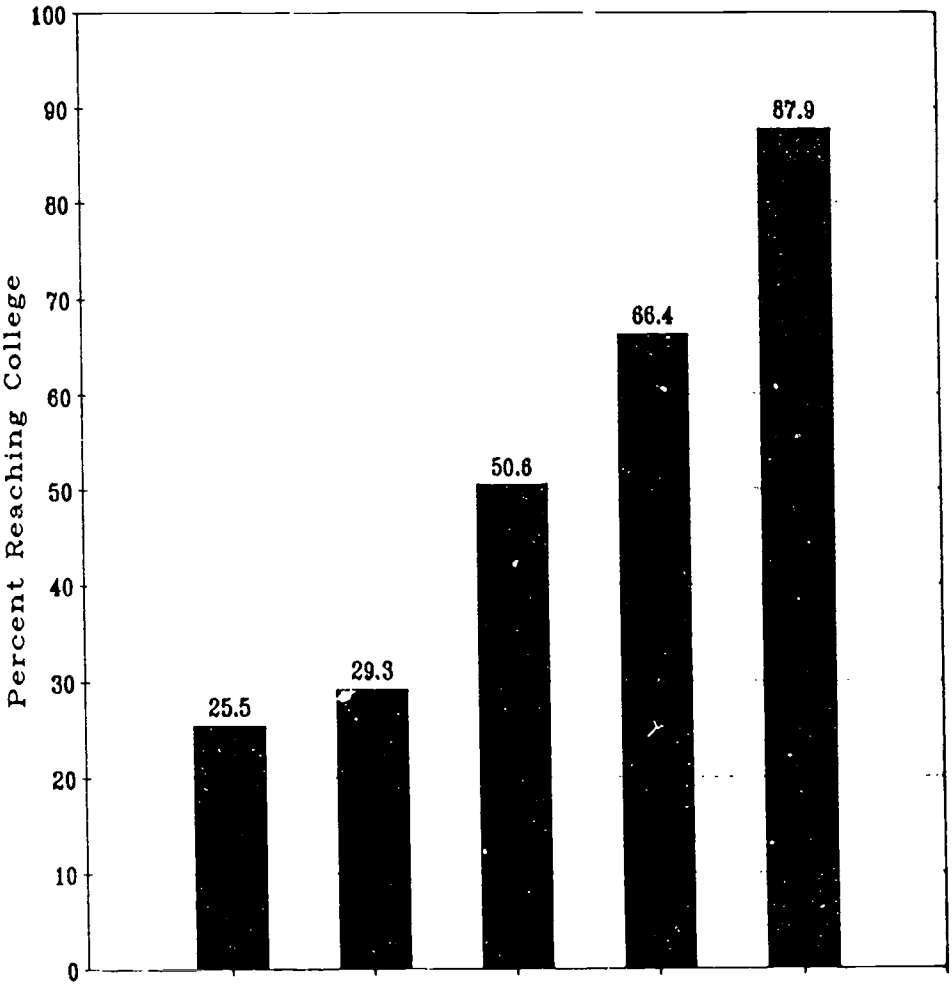
Both high school graduation and college enrollment for those who graduate from high school are strongly related to parental educational attainment. From birth a child's chances for education are powerfully influenced by the circumstances present at birth. From that point on determined parents and public policy are struggling to overcome obstacles to postsecondary education. That education has become increasingly important to not only that child's standard of living as an adult, but also the circumstances into which the next generation will be born.

Here we describe high school graduation, college participation and chance for college (the product of high school graduation rates and college participation rates) in terms of the educational attainment of the parents. What we see are simply enormous disparities in the educational attainment of young people which mirror the educational attainment of their own parents:

- A person 18 to 24 years of age whose parents are not high school graduates has only about one-third the chance of reaching college compared to another young person whose parents have a bachelor's degree from college.

At best, available data suggest little recent improvement in this relationship. At worst recent data indicate that the disparity is growing:

Chance for College
for Dependent Family Members 18 to 24 Years Old
by Educational Attainment of Family Householder, 1993



- Over the period between 1987 and 1993, high school graduation rates have declined for all groups of young adults except those whose families are headed by parents with a bachelor's degree or more from college.
- College participation rates have increased for all groups between 1987 and 1993.

This suggests that some population groups are better able to surmount the handicap of limited parental attainment than are other groups.

Of even greater social concern, however, are the inter-generational effects of limited parental educational attainment on life's prospects not only for children, but their children and their children's children. In the context of economic evolution that calls for ever greater levels of educational attainment to succeed economically, the persistence of disparities in educational opportunity resulting from circumstances present at birth will magnify huge and growing disparities in the distribution of welfare already present.

In the slash-and-burn, strip-mining, tomorrow-be-damned,throw-the-baby-out-with-the-bath water philosophy of public budgeting of social resources today, inequality of condition and inequality of opportunity are being programmed into our nation's future. As a consequence, America's best days are likely behind us.

Hope is the glue that holds a society of disparity together. As hope for a better future fades, the have-nots are likely to become increasingly intolerant of the affluence of the haves that surround them. Strong evidence of this breakdown in social cohesion has been reported regularly in **OPPORTUNITY**. It appears in the explosive growth of prison populations of males and welfare dependency among females. It appears in the diversion of social resources previously committed to the higher education of America's next generation to address the imprisoning and welfare needs of the current generation of adults

The Data and Analysis

The data analyzed and summarized here were drawn from two sources. The first source is the Census Bureau's Current Population Survey, particularly results collected in the October survey period. These results are published annually in *School Enrollment-Social and Economic Characteristics of Students* in the P-20 series on Population Characteristics.

The second data source is the annual survey of college freshmen conducted by the Higher Education Research Institute at UCLA. Results from this survey are published in *The American Freshman: National Norms for Fall 19XY* by UCLA and the American Council on Education.

To follow students in terms of their parents' educational attainment, our analyses are necessarily limited to dependent family members. Our data sources capture this information while students are yet close to their high school graduation. Thus, the parental education profile of the older students enrolled in college, especially those entering after age 24, is not available here. Other evidence suggests that first generation college students are more likely to enter college much later than are second or third generation college students who are most likely to enter college soon after high school graduation. This is a limitation in our data that the reader should note.

The pattern of analysis is the education pipeline approach. First we look at high school graduation. Then for those who graduate from high school we examine college participation. Finally, the product of high school graduation rates and college participation rates measures a person's chance for enrolling in college by the time they are 18 to 24 years old.

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Mission Statement

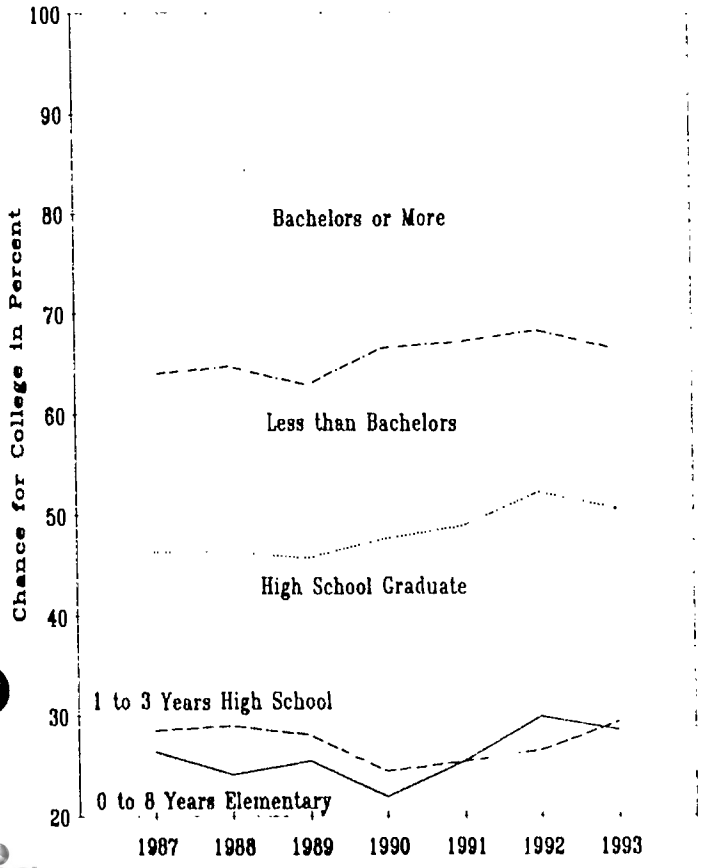
This research letter is founded on two fundamental beliefs. First, sound public social policy requires accurate, current, independent, and focused information on the human condition. Second, education is essential to the development of human potential and resources for both private and public benefit. Therefore, the purpose of this research letter is to inform those who formulate, fund, and administer public policy and programs about the condition of and influences that affect postsecondary education opportunity for *all* Americans.

Chance for College

The chart on the first page of this issue of **OPPORTUNITY** summarizes the chance that a dependent 18 to 24 year old will both graduate from high school and enroll in college in terms of the educational attainment of the family householder. In 1993 chances ranged from 25 percent of those from families headed by persons with 8 years or less of elementary education, to 88 percent of those from families headed by persons with a baccalaureate degree or more from college.

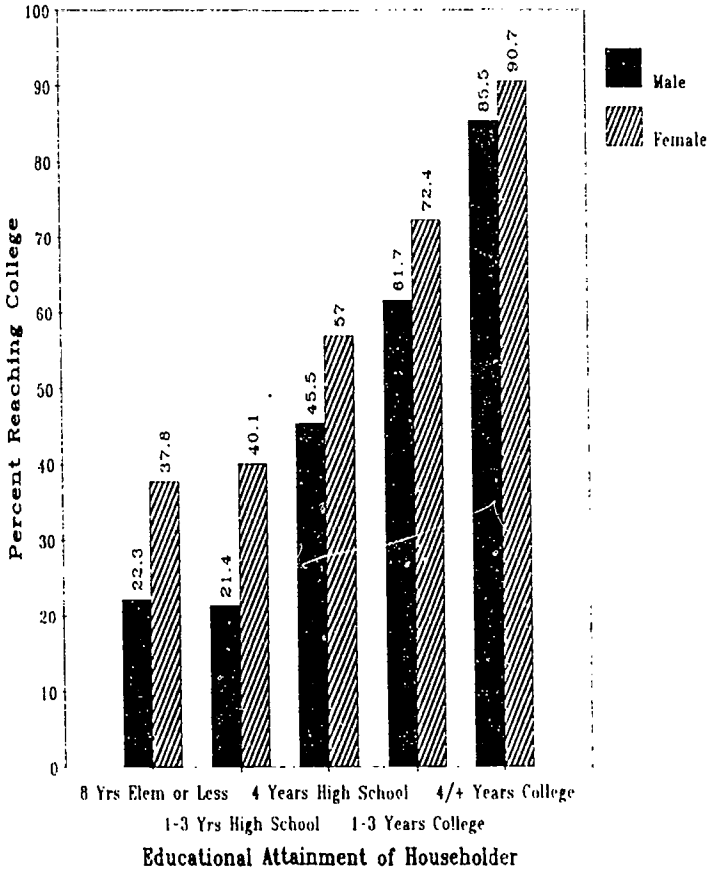
Between 1987--when the Census Bureau began reporting the data required to make these calculations--and 1993, a dependent 18 to 24 year old's chances of reaching college increased across all levels of parental educational attainment. As shown in the following chart, chance for college increased most (+4.3%) among those from families headed by high school graduates They increased least (+0.8%) among those from families headed by persons with 1 to 3 years of high school. Gains were greatest among those from families headed by parents with at least a high school education, and least among those from families headed by parents with less than a high school education.

Chance for College for 18 to 24 Year Old Dependents
By Educational Attainment of Family Householder
1987 to 1993



In 1993 dependent 18 to 24 year old women were considerably more likely than men to reach college at every level of parental educational attainment. The difference was greatest--women were nearly twice as likely as men--where parental educational attainment was least. The difference was least where parental educational attainment was greatest--among those with a bachelor's degree or more from college. (We suspect that the greater difference among women from less well educated families may be due in part to earlier marriage of women from poorer families. We lack data to examine this possibility.)

Chance for College by Gender
for Dependent Family Members 18 to 24 Years Old
by Educational Attainment of Householder, 1993



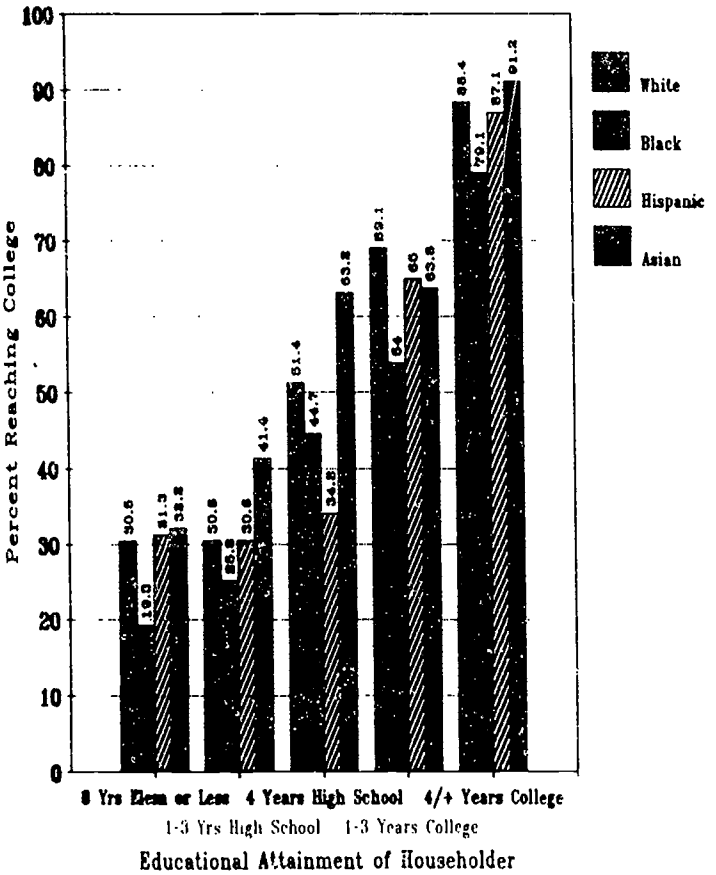
Between 1987 and 1993, the chance for enrolling in college increased more for women than it did for men at every level of parental educational attainment. The gains for women both absolutely and compared to men were greatest among women from families with parental educational attainment below the high school graduate level.

Chance for college by the educational attainment of parents affects all racial/ethnic groups in roughly the same manner. Chances are lowest for students from families where the

parents have the least education, and increase--sharply--with increasing levels of parental educational attainment. Here we have calculated chance for college for the "other race" residual population from published Census data. Other race is mainly Asian, but also includes American Indians.

At most levels of parental educational attainment, blacks are somewhat less likely than those from the other racial/ethnic groups to reach college, while Asians are somewhat more likely to reach college. These differences, however, are small when compared to the much greater influence of parental educational attainment on chances for reaching college.

Chance for College by Race/Ethnicity
for Dependent Family Members 18 to 24 Years Old
by Educational Attainment of Householder, 1993

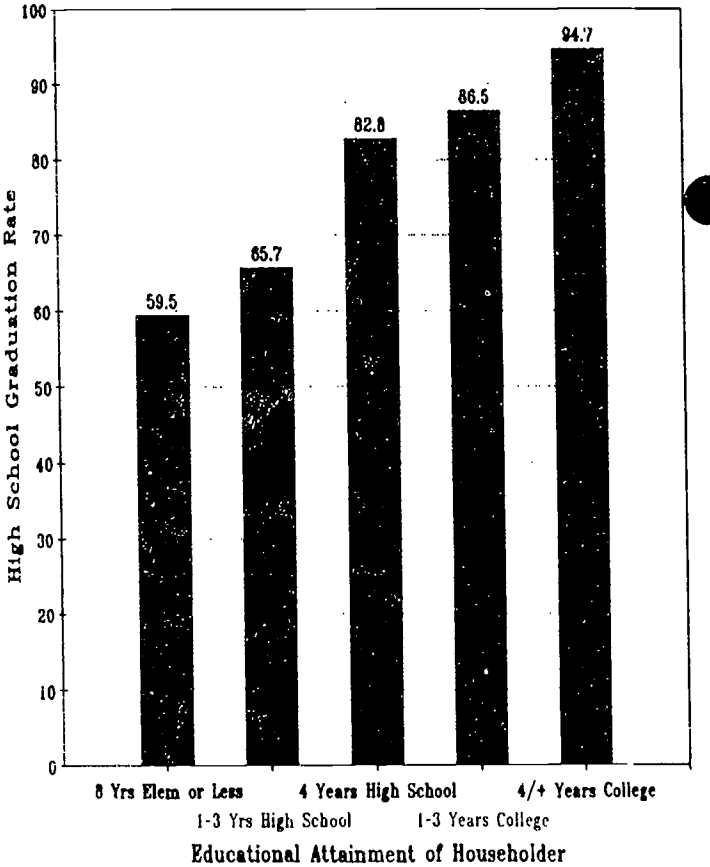


Between 1987 and 1993, chance for college increased the most for whites and Hispanics. For both groups the gains were largest among those whose parents had at least some collegiate education, and least among those whose parents had high school educations or less. Across most levels of parental educational attainment, chance for college decreased among blacks and Asians. Again, these declines were generally greatest among those with parents who had less than a high school education.

High School Graduation

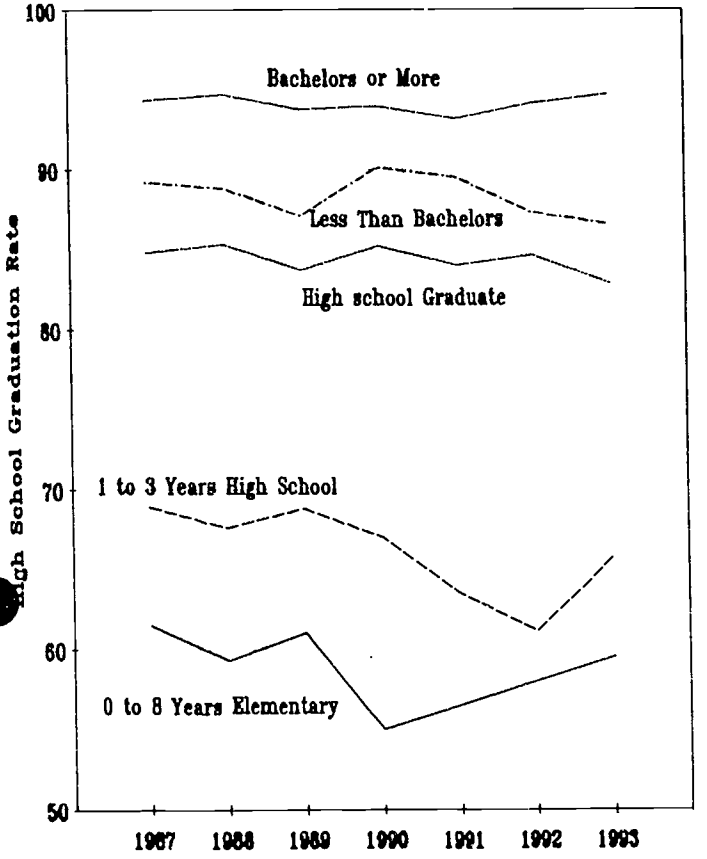
The first of the two hurdles on the path to college is high school graduation. The sorting process that determines who reaches college begins at this first hurdle. High school graduation rates are determined to a significant degree by the level of educational attainment of the parents. As shown in the following chart, high school graduation rates ranged from about 60 percent for those dependent 18 to 24 year olds from families headed by parents with 8 years or less of elementary education, to nearly 95 percent for those from families headed by parents with a bachelors degree or more from college.

High School Graduation Rates
for Dependent Family Members 18 to 24 Years Old
by Educational Attainment of Householder, 1993



For most groups of dependent 18 to 24 year olds, high school graduation rates declined between 1987 and 1993. By parental educational attainment, high school graduation rates declined for all but those from families whose parents had a bachelors degree or more from college. This was true for males, females, whites, blacks, Hispanics and Asians. The decline was greatest among those whose parents had not completed high school and among those whose parents had some college but lacked a baccalaureate degree.

High School Graduation for 18 to 24 Year Old Dependents
By Educational Attainment of Family Householder
1987 to 1993



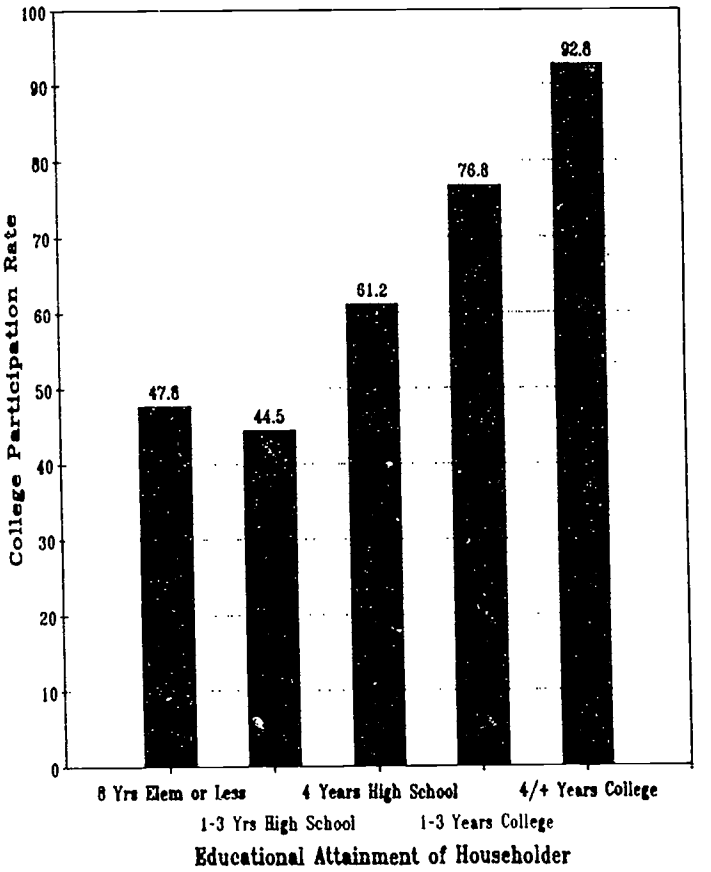
College Participation

The second hurdle is collegiate matriculation for those who graduate from high school. Here we combine Census Bureau data from current enrollment (at the time of the October Current Population Survey) with data on those no longer enrolled who have completed 1 to 3 years of college and those who have completed 4 years or more of college. College participation rates are calculated as the sum of the above three divided by the number of high school graduates in the cohort of dependent 18 to 24 year olds under our study.

The sorting according to parental educational attainment that began with high school graduation is augmented by further, harsher sorting when it comes to college enrollment. In 1993 less than half of the high school graduates that came from families headed by parents without high school diplomas had gone on to college. By comparison about 93 percent of the high school graduates from families with parents who had a baccalaureate degree or more from college had continued on to college.

This pattern holds for males, females, whites, blacks, Hispanics and Asians all. For any sub-grouping of the population, college participation rates are lowest for those from families where parental educational attainment is least, and college participation rates are highest for those from families with the highest levels of parental educational attainment. Furthermore, this pattern has persisted over the relatively brief period that the Census Bureau has reported these data--since 1987--and quite likely far longer.

College Participation Rates
for Dependent Family Members 18 to 24 Years Old
by Educational Attainment of Householder, 1993

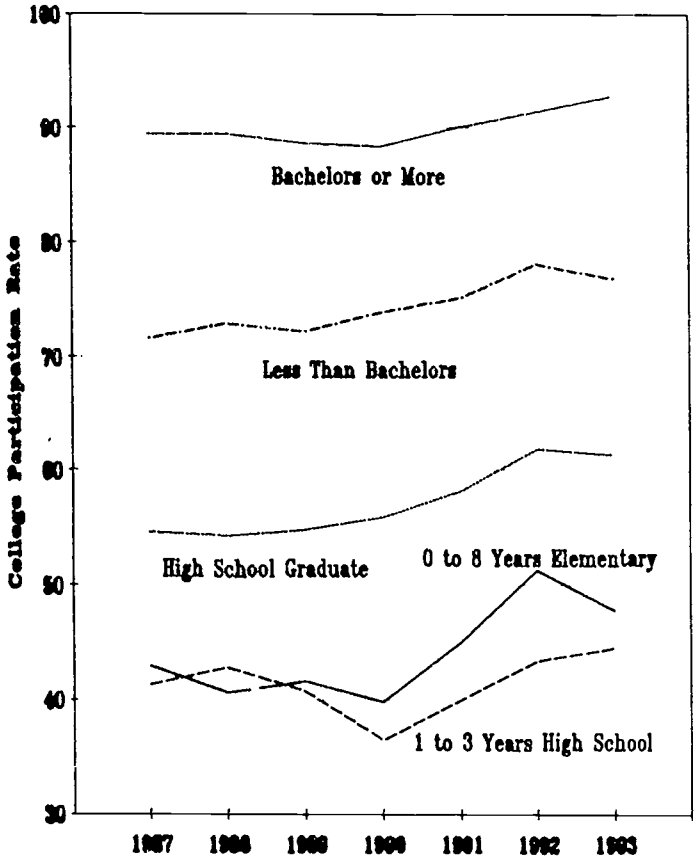


Since 1987, college participation rates for those who have graduated from high school have edged upward for all groupings by parental educational attainment. The greatest increases have occurred among those whose parents were high school graduates or had some college but less than a baccalaureate degree.

However, by gender and race/ethnicity, a more uneven picture emerges between 1987 and 1993. While college participation rates increased for both males and females, the increases for females were about twice as great as those for males. This

continues a much longer trend--covering several decades--of very large annual increases in female college participation rates while long-term males rates have remained largely stagnant. (Wake up guys!)

College Participation for 18 to 24 Year Old Dependents
By Educational Attainment of Family Householder
1987 to 1993



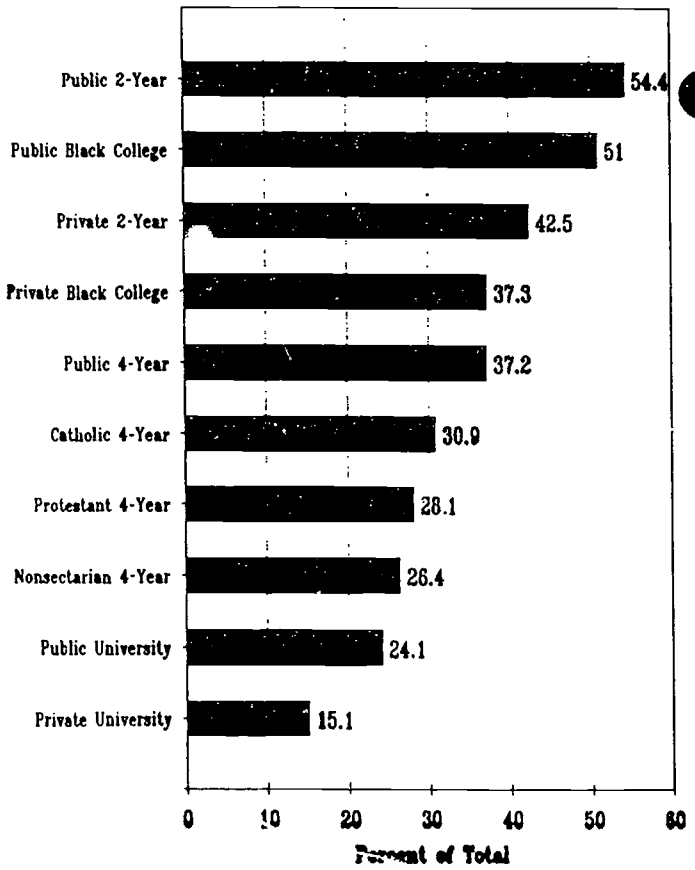
A more serious problem emerges from the racial/ethnic data. Between 1987 and 1993 college participation rates generally increased across levels of parental educational attainment for whites and Hispanics. The picture was mixed for Asians. But for blacks college participation rates generally declined. For example, among blacks whose parents had a baccalaureate degree from college, participation rates declined from 94.2 percent in 1987 to 86.5 percent by 1993. Among blacks whose parents had some college but lacked a baccalaureate degree, the decline went from 71.8 in 1987 to 68.3 percent by 1993. Similar declines were recorded for blacks from families where the parents lacked a high school diploma. Only among blacks whose parents had high school diplomas did the college participation rate increase, from 44.0 percent in 1987 to 56.4 percent in 1993.

Parental Educational Attainment by College Type

Parental educational attainment levels vary substantially by institutional type and control. This variation closely parallels institutional pricing and academic selectivity policies of institutions which have the effect of sorting collegiate enrollments largely along lines of social class.

Here we use data from the UCLA *Freshman Survey* from the Fall 1994 survey report. In the following chart, the proportion of first-time, full-time college freshmen whose fathers have no postsecondary education or training are shown. The range is from about 54 percent of those entering community colleges, to 15 percent of those entering private universities.

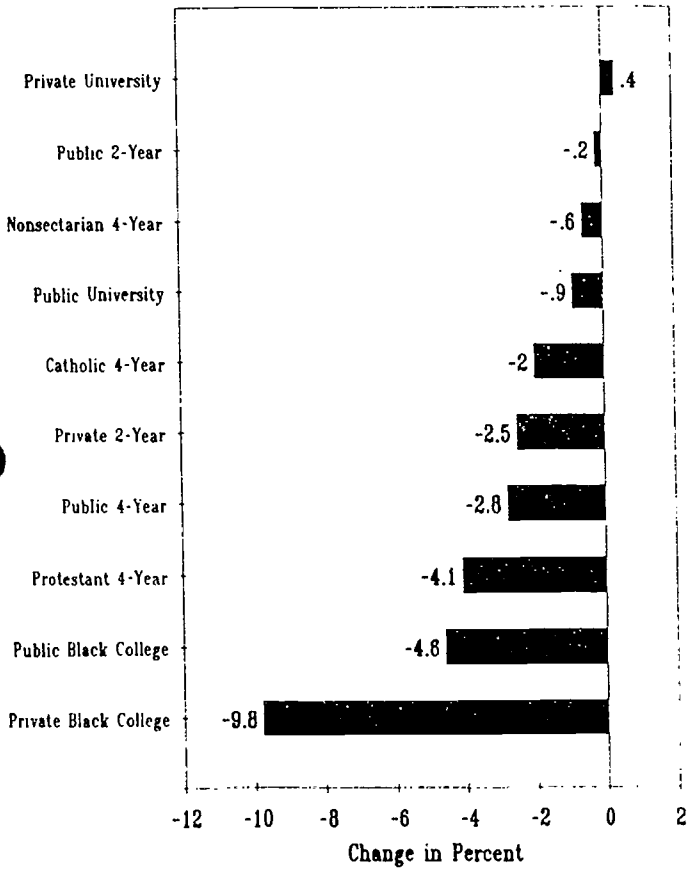
Proportion of Enrolled Freshmen
Whose Fathers Have No Postsecondary Education
1994



Between 1987 and 1994 the proportion of first-time, full-time college freshmen whose fathers had no education past high school declined, from 38.9 to 37.2 percent of all freshmen, or by 1.7 percent. However, across different types of higher education institutions quite different shifts occurred.

The only institutional type that enrolled a larger share of freshmen whose fathers had no postsecondary education or training was private universities. All other institutional types enrolled smaller shares.

Change in Proportion of Enrolled Freshmen Whose Fathers Have No Postsecondary Education Between 1987 and 1994

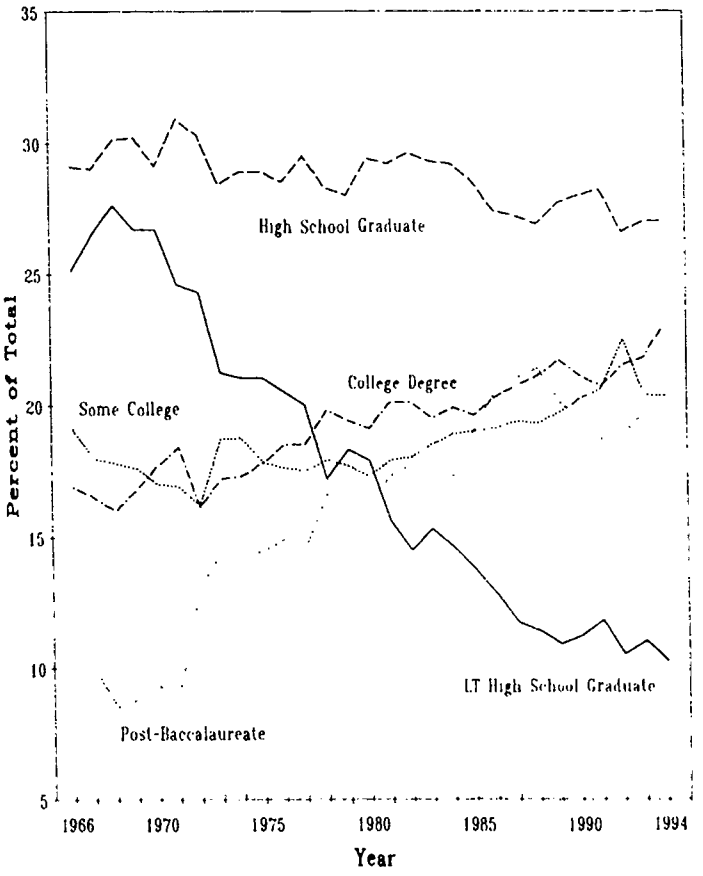


While the overall proportion of freshmen whose fathers had no postsecondary education or training declined by 1.7 percent, some types had larger declines. The institutional types whose enrollment of freshmen from these families declined by more than 1.7 percent were private black colleges (-9.8%), public black colleges (-4.6%), protestant 4-year colleges (-4.1%), public 4-year colleges (-2.8%), private 2-year colleges (-2.5%) and Catholic 4-year colleges (-2.0%). In the continuous annual processes of sorting higher education enrollments, black colleges more than any others enrolled fewer freshmen from families where the fathers had no education beyond high school.

Parental Educational Attainment

The UCLA *Freshman Survey* provides a relatively long historical record of the changing profile of parental educational attainment in the United States. The UCLA data span the period from 1966 to 1994--nearly three decades. Progress in extending opportunity for postsecondary education to previously unserved populations will, over the course of generations, produce a growing share of families where the parents have at least some and increasingly a great deal of formal higher education. This shift is evident in the chart on the following page.

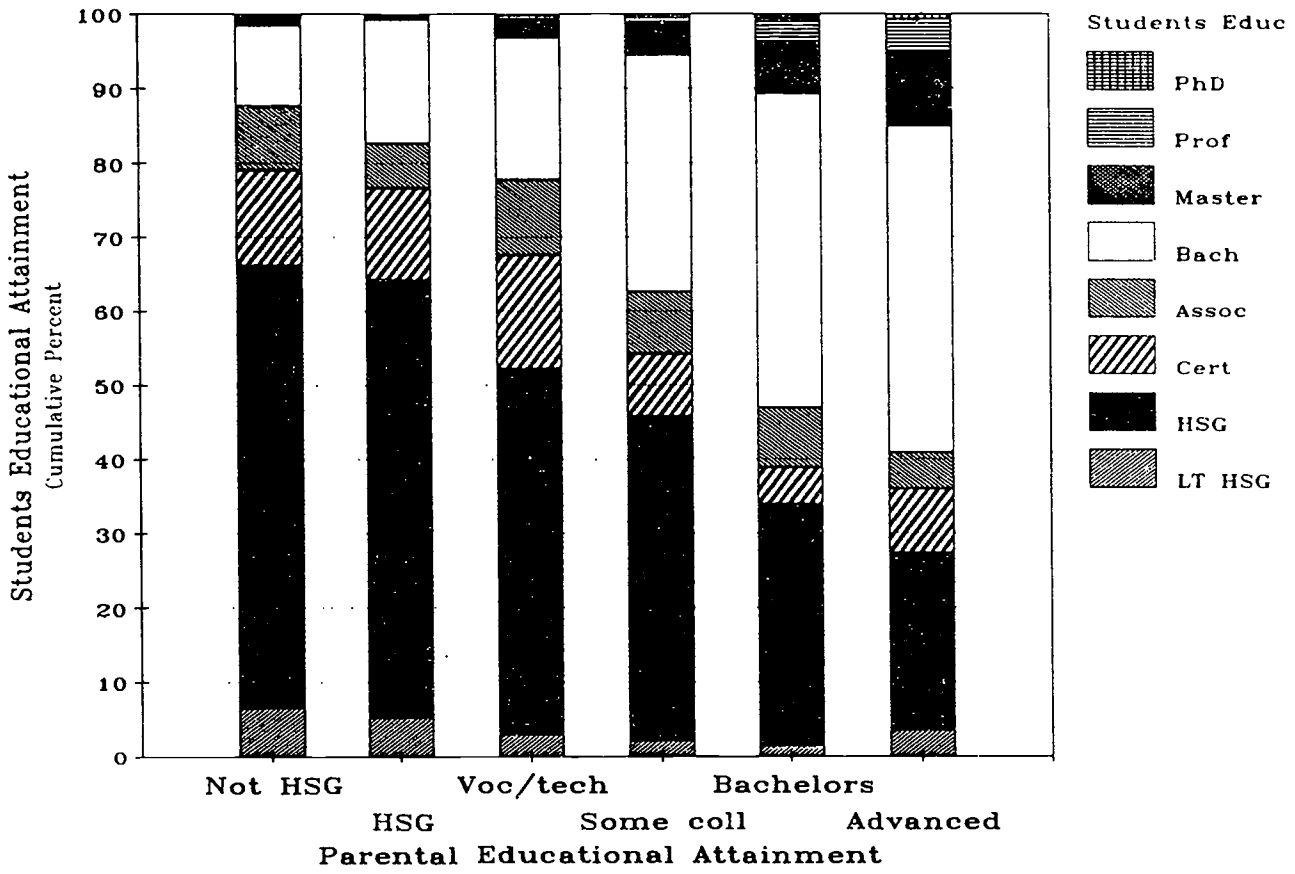
Distribution of First-Time, Full-Time College Freshmen by Fathers' Educational Attainment 1966 to 1994



Over the last 30 years, the proportion of first-time, full-time college freshmen whose fathers had no postsecondary education has declined sharply, while the proportion who come from families where the father has at least some college has grown.

- Between 1966 and 1994 the proportion of freshmen whose fathers had no education beyond high school declined from 54.2 to 34.8 percent.
- The proportion of freshmen whose mothers had no education beyond high school declined from 61.6 to 38.8 percent during this period.
- The proportion of freshmen whose fathers had a college degree or more increased from 26.6 to 45.4 percent during

Highest Degree Earned Through 1992 for 1980 High School Sophomores by Parental Educational Attainment



this period.

- The proportion of freshmen whose mothers had a college degree or more increased from 18.0 to 36.9 percent.

Conclusions

In reviewing these data, one is struck by the influence of parental educational attainment on the educational attainment of their dependent children. For those children born into families with least parental education, chances for both graduating from high school and continuing on to college are least. For other children born into families with college educated parents, chances of both graduating from high school and continuing on to college are greatest.

These findings hold for the population, for males and females, and for whites, blacks, Hispanics and Asians. These findings have persisted over the period that the Census Bureau has collected and reported these data, and quite likely for a much longer period as well.

Moreover, beyond high school graduation and college matriculation, parental educational attainment has a very strong influence on college choice. Children of college educated parents are more likely to enroll in a university than they are in a 4-year college, and more likely to enroll in a 4-year college than in a public community college. Children from families where parental educational attainment is high school or less are more likely to choose a community college.

Furthermore, data collected by the National Center for Education Statistics in the longitudinal *High School and Beyond* study show that the effects of parental educational attainment persist through years of collegiate enrollment. Students from families where parents have collegiate educations are far more likely to earn bachelors, masters, professional and doctorate degrees than are students from families with parents who have high school educations or less.

Finally, for public policy making purposes, the cross-generational effects of opportunity for postsecondary education and training must be acknowledged. Broadening opportunity for postsecondary education not only benefits those students who receive educational benefits, but their children as well. This is a critically important long range social benefit largely ignored in current public policy making and program funding.

Important Information . . . *. . . Often Misused*

Institutional Graduation Rates

College student persistence to baccalaureate degree attainment is the most difficult--and expensive--of the three hurdles that a student must surmount on the path to a baccalaureate degree. In 1993:

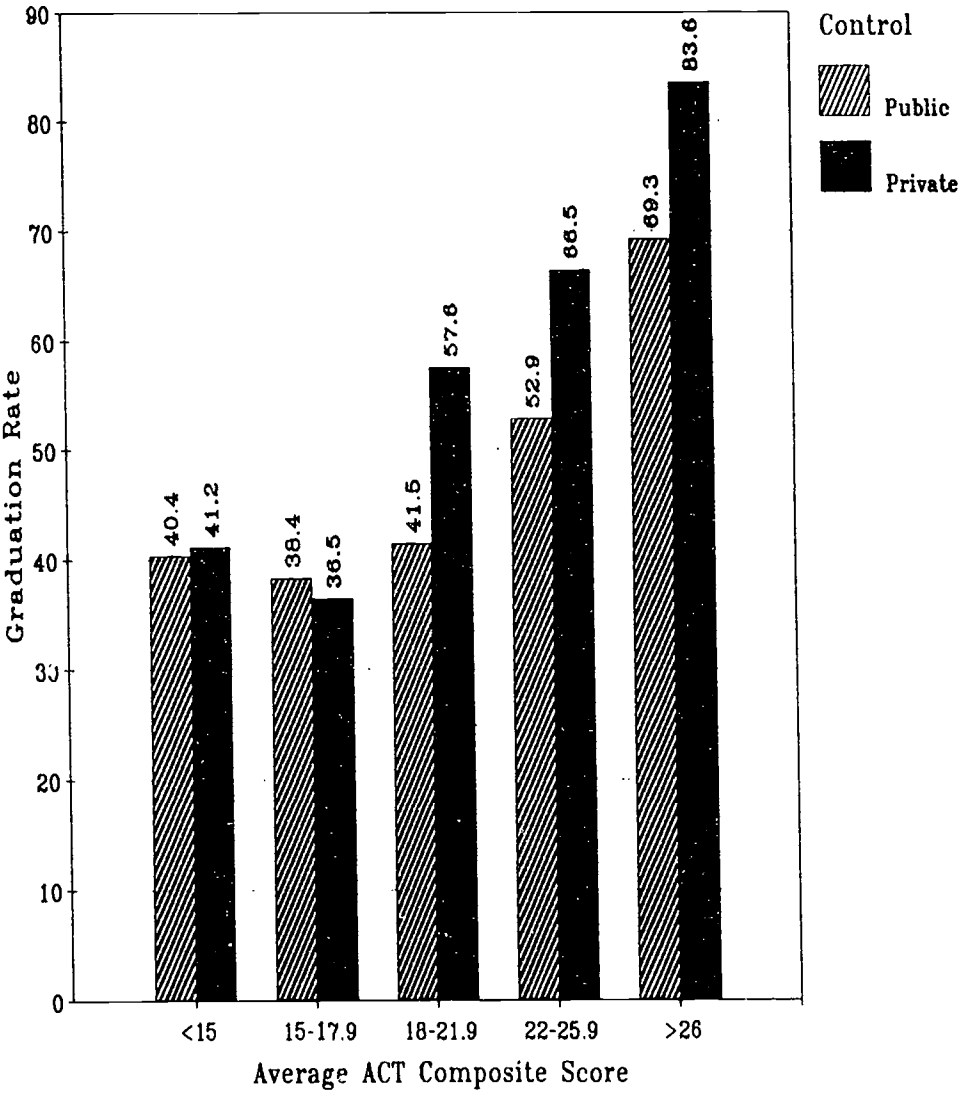
- *The high school graduation rate was about 86 percent.*
- *For those who graduated from high school, the college continuation rate was about 63 percent.*
- *For those who had enrolled in college, about 46 percent had completed a baccalaureate degree by the time they were 25 to 29 years old.*

Because of the costliness and riskiness of the college investment decision to students and their families, information on graduation rates for different institutions can assist the student and his or her family to choose a college or university that supports its students through graduation at higher rates than might other institutions. This information would also be useful to policy makers interested in evaluating the effectiveness of social resource investments in higher educational opportunity.

Unfortunately, nearly all published information on institutional graduation rates is highly misleading. The problem is not accuracy, although this too may be an issue. The main problem with published institutional graduation rates is that they usually fail to account for the different academic profiles of freshmen classes enrolled in different institutions.

- *One would expect highly selective institutions to graduate talented students at very high rates.*
- *One would also expect less selective institutions enrolling somewhat less academically talented students to graduate their students at somewhat lower rates.*
- *Open admissions institutions that are least selective in admissions practices could be expected to have institutional graduation rates below more selective institutions.*

Graduation Rates for
Public and Private Universities by Admissions Selectivity
1994



Research on student academic performance consistently finds that success leads to success. Students who were successful in high school are likely to be successful in college. Students who were less successful in high school are likely to be less successful in college. When institutions draw their freshman classes

from different portions of the pool of applicants, differences in institutional graduation rates can be expected to result.

Even more important than adjusting institutional graduation rates for differences in the academic profiles of admitted freshman classes is what this process enables us to say about institutions with above and below expected graduation rates. Given the academic profiles of the admitted freshmen classes, some institutions appear to have much better than "average" institutional graduation rates while other institutions appear to have much worse rates. Students and policy makers should be aware of these differences when interpreting reported data on graduation rates for particular institutions.

There are no published consumer guides to the proper interpretation of institutional graduation rates. We intend to start correcting this problem here and now. This will not be the guide, but it will illustrate how to correct published institutional graduation rates for differences in the academic profiles of freshmen enrolled in specific colleges and universities.

The Data on Graduation Rates

Institutional graduation rates are calculated by following a particular class of freshmen entering a particular college or university through to graduation five or six years later. The graduation rate for the institution is the proportion of the original freshman class that have received their bachelor's degree five or six years after entering the institution. Most institutional graduation rate data are calculated on the six year basis, although some data used here (ACT) has been calculated on a five year interval.

Institutional graduation rate data have been gathered from institutions and published by a number of national organizations. Data examined for this analysis were provided from *U.S. News* magazine, the National Collegiate Athletic Association, and the American College Testing Program (ACT).

Elfin, M. and Wright, A. R. "America's Best Colleges." *U.S. News and World Report*, September 26, 1994.

National Collegiate Athletic Association. *1993 NCAA Division I Graduation-Rates Report*. June 1993.

American College Testing Program. *National Dropout Rates and National Graduation Rates*. 1990, 1993 and 1994.

The reported institutional graduation rates by *U.S. News* and the NCAA are based on six year follow-ups. ACT collects and reports institutional graduation rates on a five year follow-up.

Data from the National Center for Education Statistics showed that in 1990 about 68 percent of those who received bachelors degrees did so in six years or less. This was down from 71 percent who received their bachelor's degrees in 1986 and 75 percent for those who received their degrees in 1977 (see **OPPORTUNITY** Number 25, July 1994). Because college students are taking longer to complete their baccalaureate degrees, we prefer the six year follow-up. But even this misses nearly a third of those who ultimately receive bachelor's degrees from college.

Reporting Problems

An institution's graduation rate means little by itself. It starts to become interesting when it is compared to another institution's graduation rate or the graduation rates for different student populations within the same institution.

One example of reported institutional graduation rates is that used by the National Collegiate Athletic Association to compare athletes to all students in the 288 Division I institutions. The published NCAA data detail graduation rates by gender, race/ethnicity and sport category. Average SAT, ACT and high school GPA are reported for student athletes by sport category. The aggregate reports summarizing these data show freshman cohort graduation rates as follows:

Institutional Graduation Rates
Four-Year Averages for Freshman Cohorts

	N	All Students	Student-Athletes
Division I Summary	298	54%	53%
Division I-A	107	57%	54%
Division I-AA	88	50%	50%
Division I-AAA	103	48%	55%
Public Institutions	198	50%	48%
Large Publics	99	54%	52%
Small Publics	99	39%	43%
Private Institutions	100	68%	67%
Large Privates	50	71%	70%
Small Privates	50	61%	65%

These data are interesting, and invite comparisons. However, they say nothing about differences in the academic profiles of all students compared to student-athletes. Unless and until one

understands academic profile similarities and differences, it is very difficult to draw meaningful conclusions about the institutional graduation rates reported by the NCAA for all students compared to student-athletes, between institutions or between different types of institutions. Academic controls are not present in the NCAA data.

A somewhat similar problem is evident in the *U.S. News* ratings of national colleges and universities. Among the data elements collected from institutions and used in the ratings are mean SAT or ACT test scores for entering freshman and the average percentage of freshmen entering between 1984 and 1987 who graduated within six years.

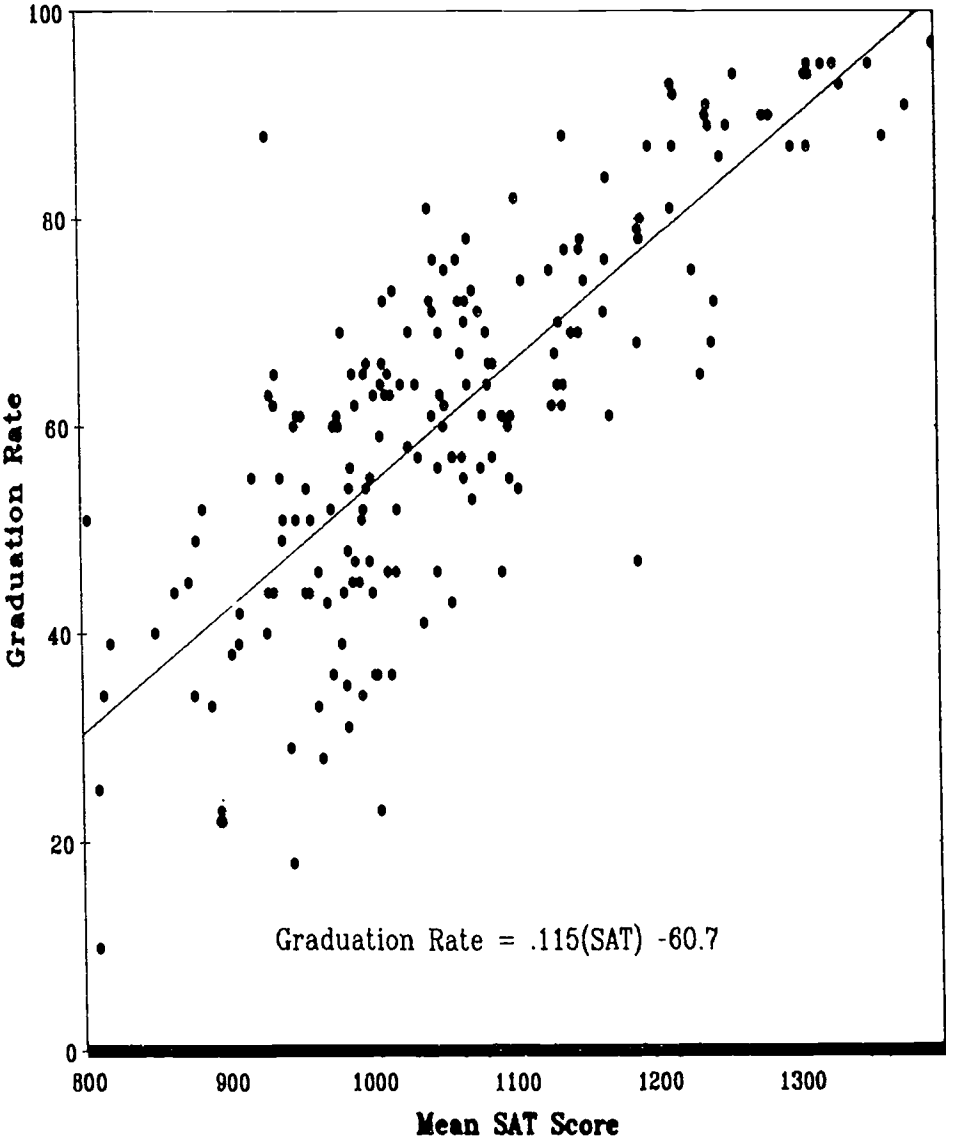
A cursory review of the *U.S. News* ratings shows that top rated colleges and universities have both very high average SAT scores and very high institutional graduation rates. Other colleges and universities with lower ratings have both lower average SAT scores and lower institutional graduation rates. This is not true for all schools, however, and the lack of perfect correlation itself invites analytical inquiry.

Statutory Reporting Requirements

In 1990 Congress passed the *Student Right-To-Know and Campus Security Act*. Incorporated into Section 485 of the Higher Education Act, institutions participating in Title IV student financial aid programs are required to accurately describe to prospective and enrolled students "the completion or graduation rate of certificate- or degree-seeking, full-time, undergraduate students entering such institutions."

The Law goes on to specify the calculation of institutional graduation rates as including students who graduate or complete a program within 150 percent of the normal time for completion of or graduation from the program.

Institutional Graduation Rates by SAT Scores for National Universities



National Universities

We have reanalyzed the data published by *U.S. News* in their annual report on "America's Best Colleges" (with their permission) in an effort to improve the reporting of institutional graduation rates. We have done so for both the national universities as well as the national liberal arts colleges listed in the *U.S. News* report.

Our analysis of the published data on institutional graduation rates controls for the academic profile (measured by SAT scores) of the freshmen admitted to these institutions.

First, we have plotted reported institutional graduation rates (IGR) against mean/median SAT scores reported for the same institutions. That scatter-plot appears above for the 188 national universities for which

both graduation rate and SAT data were reported. We have also calculated the correlation between SAT and IGR. The correlation is .802 for these 188 universities.

Next we calculated the regression line through this data set. The regression line for these data is:

IGR = (.115 x SAT) -60.7

That is to say, for this set of 188 national universities, the *predicted* graduation rate *controlling for the mean/median SAT of freshmen entering each institution* is .115 times the SAT score minus 60.7.

Finally, we went back to the data reported for the 188 national universities and, in addition to the reported SAT and IGR, we calculated a *predicted* institutional graduation rate based on the academic profile of the freshmen admitted to each institution. We then compared the actual to the predicted institutional graduation rate for each institution, and re-ranked the 188 national universities according to this difference.

The results of the re-ranking produce three groups of national universities:

- **Group A:** The universities whose actual institutional graduation rates fall more than one standard error above their predicted IGR. These universities appear to graduate their students at above average rates, *controlling for the academic profiles of the freshmen they enroll.* There were 28 universities in this group.
- **Group B:** Universities whose actual IGRs are within one standard error of their predicted IGR. These universities have about average graduation rates for the kinds of freshmen they enroll. There were 132 universities in this group.
- **Group C:** Universities whose actual IGRs are below one standard error of their predicted graduation rate. These universities appear to graduate their freshmen at below average rates *controlling for the academic profiles of the freshmen they enroll.* There were 28 universities in this group.

Universities that want to compare their predicted to actual graduation rates may use the prediction equation reported here. They should be careful to use data used in the *U.S. News* article, or data defined in the same manner. We will offer to subscribers to **OPPORTUNITY** from any of the 188 national universities listed in the *U.S. News* article a copy of our spreadsheet from this analysis, but you must be a subscriber and listed in the *U.S. News* article to receive it without charge.

To recognize excellence in the national universities that deserve it (and avoid embarrassment to the national universities that ought to have higher institutional graduation rates), we list here the 28 national universities in Group A whose actual institutional graduation rate is more than one standard error above their predicted institutional graduation rate. These institutions appear to be doing an especially good job of graduating the freshmen they admit.

National Universities with High Institutional Graduation Rates

University	State	SAT	Actual	Pred.	Diffrnc.
Hahnemann Univ	PA	931	88	46	42
Un of No Carolina-CH	NC	1045	81	59	22
Clark Atlanta Univ	GA	804	51	32	19
Bowling Green St Un	OH	935	65	47	18
Lehigh Univ	PA	1140	88	70	18
Michigan State	MI	980	69	52	17
Duquesne Univ	PA	1010	72	55	17
Univ of Vermont	VT	1045	76	59	17
St. John's Univ	NY	932	63	46	17
Un of New Hampshire	NH	1020	73	56	17
Fordham Univ	NY	1070	78	62	16
Miami University	OH	1105	82	66	16
Seton Hall Univ	NJ	935	62	47	15
Marquette Univ	WI	1055	75	60	15
Clark University	MA	1065	76	62	14
Emory University	GA	1220	93	79	14
Univ of Delaware	DE	1045	72	59	13
Indiana Univ of PA	PA	951	61	48	13
Indiana University	IN	996	66	54	12
Univ of Virginia	VA	1225	92	80	12
Un of Rhode Island	RI	955	61	49	12
Un of Mass-Amherst	MA	990	65	53	12
Clemson University	SC	1045	71	59	12
Pace University	NY	950	60	48	12
Purdue Univ-WL	IN	995	65	54	11
Univ of Connecticut	CT	1030	69	58	11
Univ of Nevada-Reno	NV	885	52	41	11
Univ of CA-Santa Barb	CA	1010	66	55	11

We are tempted to also identify here those Group C national universities whose actual institutional graduation rates fell more than one standard error below their predicted rates. But you will know who you are. Check your data.

If your data checks out, then you might start asking yourself why your institution graduates the freshmen you admit at well below average rates. Maybe supporting your students more effectively should become a higher institutional priority than it has been in the past.

National Liberal Arts Colleges

We have performed the same kind of analysis of institutional graduation rates on national liberal arts colleges that we did on national universities. There are 152 institutions with complete data in the *U.S. News* article on "America's Best Colleges." The results of our analysis follow.

First, we plotted institutional graduation rates (IGR) against mean/median SAT scores for the same institutions. The scatter-plot of these paired data is shown at the right. The correlation between mean/median SAT and institutional graduation rates for these 152 institutions is .643.

Then we calculated the regression line through this data set. The regression line for these data is:

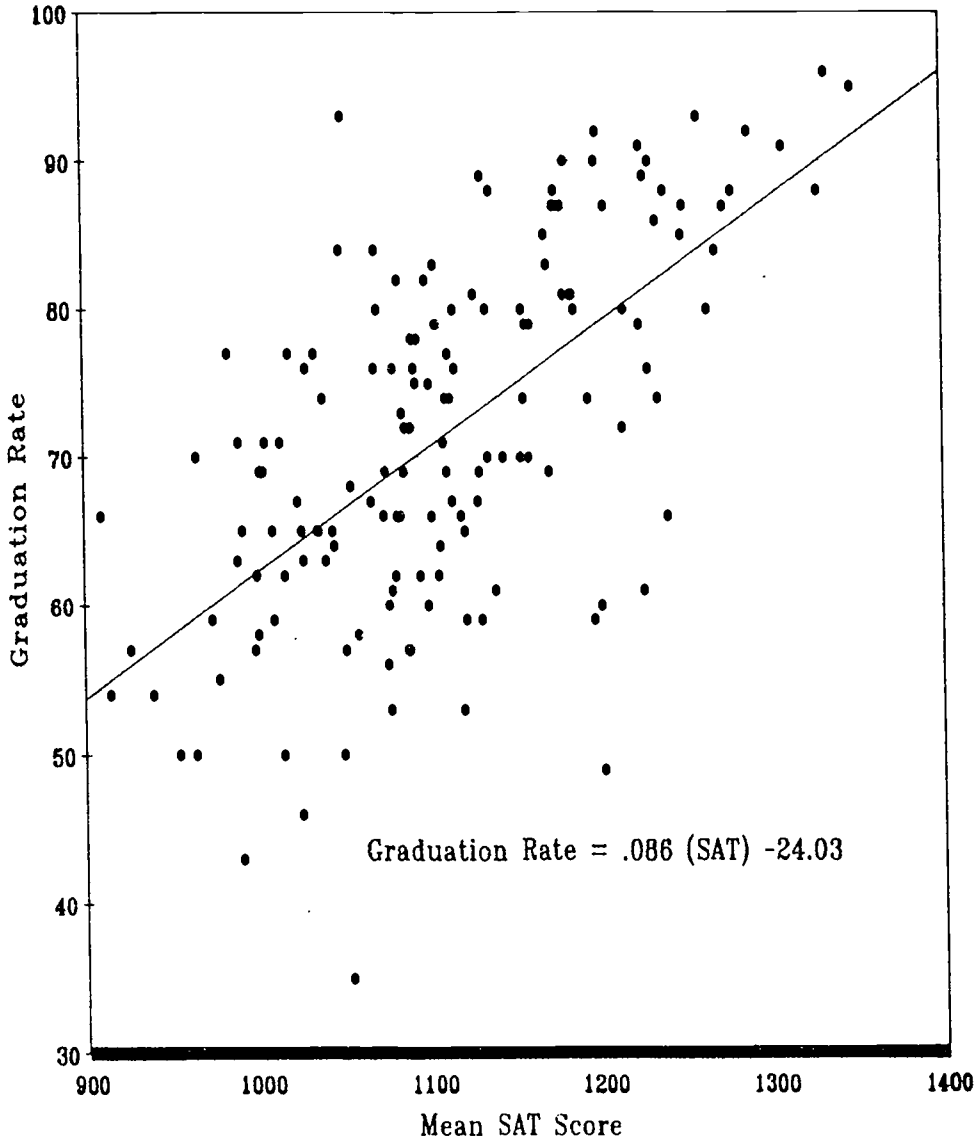
IGR = (.086 x SAT) -24

Finally, we calculated *predicted* institutional graduation rates for each of the 152 national liberal arts colleges using this regression equation. The predicted IGR was compared to the actual IGR. Institutions were then re-ranked according to the difference between their predicted and actual institutional graduation rates.

The 152 national liberal arts colleges were then assigned to one of three groups.

- **Group A:** These colleges had predicted IGRs that were more than one standard error below their actual graduation rates. These colleges appear to graduate their students at well above average rates, *controlling for the academic profiles of the freshman classes that they enroll.* There were 24 colleges in this group.
- **Group B:** These colleges had actual graduation rates that were within one standard error of their predicted rate. These colleges have about average graduation rates for the academic profiles of the freshmen that they enroll. There were 109 colleges in this group.
- **Group C:** These colleges had actual graduation rates that were more than one standard error below the predicted graduation rate, controlling for the academic profiles of the freshmen they accepted for admission. There were 19 colleges in this group.

Institutional Graduation Rates by SAT Scores for National Liberal Arts Colleges



Liberal arts colleges that want to determine if their actual institutional graduation rate is above or below that predicted for an institution enrolling freshmen with their particular academic profile may use the regression equation derived for liberal arts colleges. Make certain that data used is comparable in definition to that used in the *U.S. News* article. Subscribers to **OPPORTUNITY** from any of the 152 national liberal arts colleges listed in the *U.S. News* article may request a copy of our spreadsheet used in this analysis, but you must be

both a subscriber and listed in the *U.S. News* article to receive it free of charge.

We want to recognize the 24 national liberal arts colleges with well above average institutional graduation rates because they are apparently providing supportive institutional environments for the freshmen classes they admit through six years of campus study. (By the way, we congratulate Pennsylvania for placing so many colleges on this list.)

National Liberal Arts Colleges with High Institutional Graduation Rates

College	State	SAT	Actual	Pred	Diff
Providence College	RI	1050	93	66	27
Westmont College	CA	1050	84	66	18
Westminster College	PA	985	77	61	16
Dickinson College	PA	1070	84	68	16
Lafayette College	PA	1130	89	73	16
Hamilton College	NY	1138	88	74	14
Albright College	PA	1020	77	64	13
St. Lawrence Univ.	NY	1080	82	69	13
Bowdoin College	ME	1200	92	79	13
Bucknell University	PA	1180	90	77	13
Juniata College	PA	1035	77	65	13
Washington & Jefferson	PA	1105	83	71	12
Muhlenberg College	PA	1071	80	68	12
Concordia College	MN	910	66	54	12
Hiram College	OH	1030	76	65	11
Presbyterian College	SC	1100	82	71	11
Goshen College	IN	965	70	59	11
Connecticut College	CT	1175	88	77	11
Colgate University	NY	1200	90	79	11
Colby College	ME	1175	87	77	10
Smith College	MA	1175	87	77	10
Hartwick College	NY	990	71	61	10
Coll of the Holy Cross	MA	1225	91	81	10
Trinity College	CT	1180	87	77	10

Trends in Institutional Graduation Rates

Public data on institutional graduation rates is a relatively recent phenomena--largely of the 1990s. Therefore, long term trend analysis of these data will have to wait another decade or so.

However, the American College Testing Program has collected and tabulated institutional survey data on five-year graduation rates from institutions since 1990. These data have been reported by admissions selectivity, and institutional type and control.

While the available ACT data covers a relatively short span of time--1990 to 1994--some trends are evident, and these trends are consistent across institutional types and quite disturbing.

Institutional Five-Year Graduation Rates by Admissions Selectivity, 1990, 1993 and 1994

Mean ACT Score	1990	1993	1994	Change
Public Universities (N=176)				
26 or more	64.1	69.1	69.3	+5.2
22-25.9	54.6	53.8	52.9	-1.7
19-21.9	44.3	41.8	41.5	-2.8
15-17.9	43.6	44.3	38.4	-5.2
15 or less	43.8	42.7	40.4	-3.4
Private Universities (N=147)				
26 or more	81.5	83.4	83.6	+2.1
22-25.9	66.0	66.5	66.5	+0.5
18-21.9	57.3	60.7	57.6	+0.3
15-17.9	46.7	38.2	36.5	-10.2
15 or less	45.6	44.6	41.2	-4.4
Public MA/1st Prof (N=231)				
26 or more	57.3	68.5	70.5	+13.2
22-25.9	46.3	44.4	42.5	-3.8
18-21.9	48.4	45.8	44.5	-3.9
15-17.9	40.4	34.6	36.0	-4.4
15 or less	38.4	38.5	39.6	+1.2
Private MA/1st Prof (N=435)				
26 or more	78.5	79.5	79.4	+0.9
22-25.9	65.5	64.9	64.4	-1.0
18-21.9	57.6	55.6	55.1	-2.5
15-17.9	46.9	46.7	47.4	+0.5
15 or less	50.1	48.3	49.5	-0.6
Public BA (N=72)				
26 or more	61.0	66.8	63.7	+2.7
22-25.9	60.7	62.8	64.4	+3.7
18-21.9	51.4	51.5	55.1	+3.7
15-17.9	49.0	42.0	40.2	-8.8
15 or less	42.0	36.3	33.2	-8.8
Private BA (N=519)				
26 or more	82.0	84.2	84.5	+2.5
22-25.9	68.1	67.7	68.0	-0.1
18-21.9	54.2	54.7	53.1	-1.1
15-17.9	46.0	41.8	40.8	-5.2
15 or less	41.1	40.3	39.8	-1.3

Five-year graduation rates are increasing among the most selective public and private universities and colleges, and

decreasing among those that are less selective in admissions. Expressed in terms of students, this implies that college graduation rates are improving for the most talented students and worsening for students with average or below average academic credentials.

Summary and Conclusions

This analysis explored institutional graduation rates, or the proportion of freshmen admitted to particular institutions that received their bachelor's degrees within either five years (using ACT data) or six years (using *U.S. News* data).

Published data on institutional graduation rates are a relatively recent development in the system of collection and reporting of statistics on higher education. The federal government forced the issue in 1990 by requiring institutions participating in federal Title IV student financial aid programs to collect and report these data to prospective and currently enrolled students. This data was deemed important to prospective college students using federal student aid, especially loans, to finance their higher educations. The student loan default problem is driven substantially by students who drop out of college before graduation. Informing students of the drop-out risks before they assume educational debt was thought to be helpful to both students and the federal government in controlling the student loan default problem.

Unfortunately, the manner in which institutional graduation rate data is being collected and reported is too often misleading. Institutional data is the sum of the behaviors of individuals with widely differing academic records and talents. Institutions that enroll well prepared and highly talented students should be expected to have very high institutional graduation rates because students with these characteristics are most likely to successfully complete the collegiate studies for which they enter college. Institutions that enroll less well prepared and less academically talented students could be expected to graduate freshman cohorts at lower rates because such students are less likely to be successful in college. The same argument holds for different student groups within an institution: unless student-athletes have comparable academic profiles to all undergraduate students, direct comparisons such as those published by the National Collegiate Athletic Association are inappropriate and misleading.

At the very minimum, institutional graduation rate comparisons begin to take on meaning only when the academic backgrounds of students entering different institutions or within an institution are appropriately accounted for. Appropriate academic controls might include high school graduates, high school class rank, academic coursework taken in high school, or standardized test scores such as the SAT or ACT.

When these controls are introduced, a re-ranking of institutions by their institutional graduation rates occurs. Some institutions have much better success in graduating admitted freshman cohorts within six years than do other institutions.

Our analysis of institutional graduation rates for 188 national universities and 152 national liberal arts colleges controlled for the academic backgrounds of entering freshman cohorts by using the mean/median SAT test score for each institution. From this analysis we identified 28 universities and 24 liberal arts colleges with extraordinarily high institutional graduation rates given the academic profiles of the freshmen admitted to the institution.

This analysis also identified (but did not list) 28 universities and 19 liberal arts colleges with extraordinarily low institutional graduation rates given the academic profiles of the freshmen cohorts admitted to these institutions for study. The former group deserves recognition and praise. The latter group ought to set out to explore the conditions within their institutions that have lead to the unusually low graduation rates for freshmen admitted for study to these campuses.

Finally, two public interests guide our interpretation of the importance of correctly understanding institutional graduation rates. One is student loan defaults, and the other is what happens to students who are deemed admissible as freshmen but are unable to complete their programs of study.

Educational loans have come to dominate public policy thinking about student financial aid. As a share of all student aid dollars, loans have grown from 17 percent in 1975-76 to 53 percent in 1993-94. The proportion of freshmen receiving loans to finance college increased from 10 percent in 1978 to 29 percent by 1994. Unfortunately, much of this growth has occurred among populations previously dependent on grants which no longer meet need without loan assistance. For these grant-dependent populations, college is an especially risky investment decision and correct information on institutional graduation rates is important to being able to make an informed investment decision about matriculation.

A related issue is the effect of admission and attrition on the life of the student. Abundant data indicates that higher education as a social institution views its social role as selection of talent for promotion into roles of social leadership and economic prosperity, and de-selection of the less talented. In a social, economic and political system of great riches where opportunities to achieve them are determined by educational attainment, the sorting processes of higher education will determine the living standards and social status of students for the rest of their lives after college. This is a responsibility of profound consequence to students and society.

12th Annual Financial Aid Research Network Conference

June 8-10, 1995, Minneapolis

The premier national forum for research on student financial aid will be held in Minneapolis this year. This annual conference is sponsored by the National Association of State Scholarship and Grant Programs and the National Council of Higher Education Loan Programs. Conference presenters are members of a national network of student financial aid researchers and policy analysts at state grant and loan agencies, federal agencies, postsecondary institutions, education associations and other organizations concerned with student financing of higher education.

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- *Alternative Pell Grant Allocation Simulations*
- *Toward a State Index of Educational Opportunity*
- *Estimating the Cost of Public Higher Education*
- *The Future Role and Prospects for Private Funding for Student Financial Aid*
- *Using New System Thinking and System Dynamics Tools to Strengthen Student Aid Policy Analysis*
- *Financial Aid for Selected Populations: Minorities, Older Students, and Part-Time Students*
- *Use of Institutionally Provided Student Aid*
- *The PLUS Loan Program Since the Abandonment of Limits*
- *Parental Preparedness for Financing Postsecondary Education*
- *Legacies of Paying for College*
- *Political Process Model of Legislative Process of Direct Loan Demonstration Program*
- *Race/Ethnicity-Specific Student Financial Aid*
- *Increasing Indebtedness-How California Students Pay for College*
- *Implementation of the Direct Loan Program at One University: A Case Study*
- *State-Level Early Intervention Programs*
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Postsecondary Education
OPPORTUNITY

The Mortenson Research Letter on Public Policy Analysis of Opportunity for Postsecondary Education

Number 34 | **Iowa City, Iowa** | **April 1995**

For Some . . . *. . . More than Others*

Anxiety About Affordability

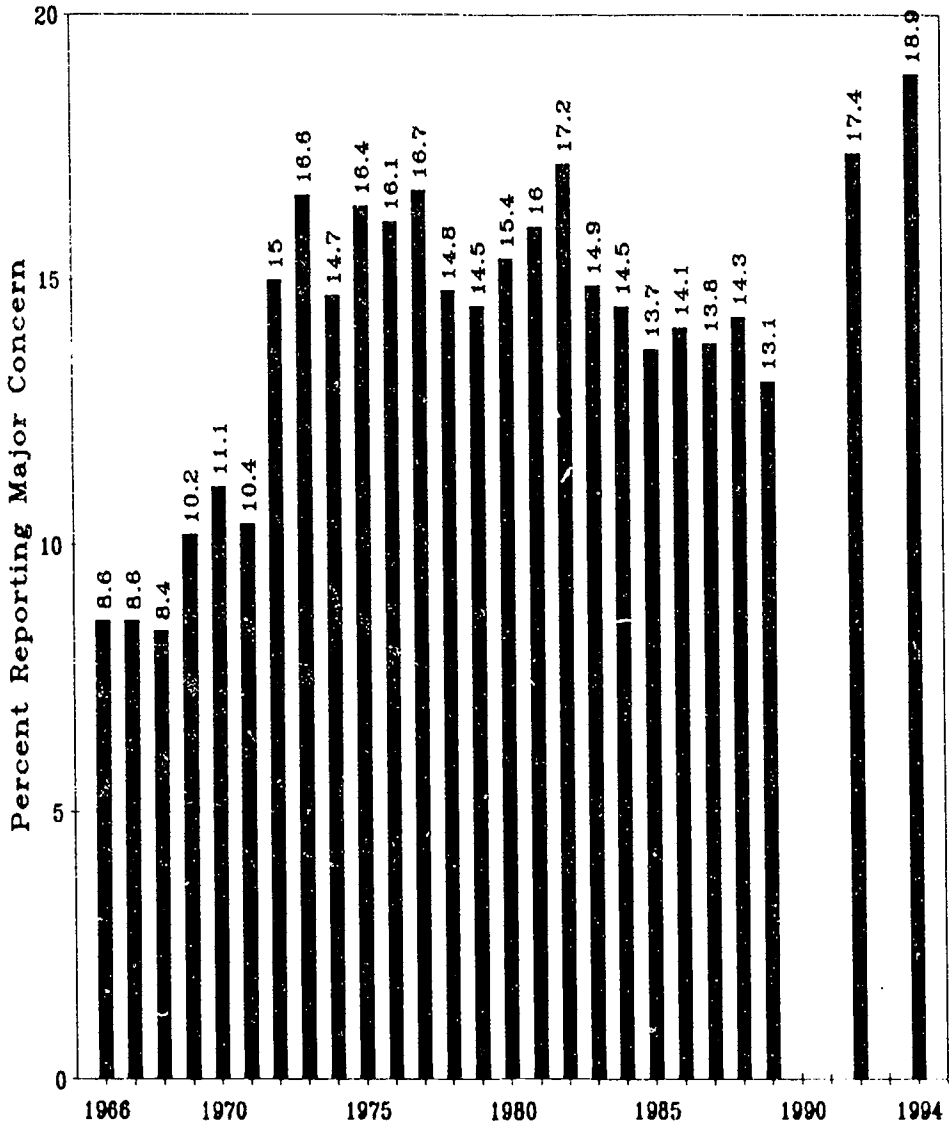
The college freshmen class of 1994 reports that they are more concerned about their ability to finance their higher educations than has any previous freshman class in the last three decades, according to the annual UCLA survey of American college freshmen.

Because much of the cause of this anxiety is the direct consequence of public policy decisions to shift the costs of higher education from taxpayers to students, we explore the affordability issue in some detail here.

The affordability problem for educational opportunity is not new, but it is clearly getting worse. During the last 15 years the federal government and all 50 states have walked away from commitments made in the 1950s, 1960s and 1970s to broaden opportunity for postsecondary education and training by making education after high school more affordable. Between 1979 and 1993, $14.2 billion of previous federal and state taxpayer support has been shifted to students: $4.5 billion at the federal level by substituting loans for grants, and $9.8 billion at the state level by diverting state tax resources to other budget priorities and charging students higher tuitions to make up the difference.

Of course student concern about college affordability is rising. How could it be otherwise?

Major Concern About Financing Higher Education Among College Freshmen, 1966 to 1994



In the following analysis, we use data from the UCLA freshman survey--much of it previously unpublished--and from other sources to describe the evolution of the affordability problem in higher education. Most important, this analysis clarifies for what kinds of students the affordability of higher education is a serious problem. The findings from the analysis identify the

following groups as most concerned about higher education's affordability:

- Concern about affordability is negatively related to family income: affordability is of greatest concern to students from low income family backgrounds, and of least concern to students from high income family backgrounds.
- Women students are consistently more concerned about affordability than are men.
- Hispanics students are the most concerned about college costs among racial/ethnic groups. Whites are the least concerned.
- Freshmen in black colleges and in private 4-year colleges are more concerned about affordability than are students in universities, either public or private.

The UCLA Freshman Survey Data

The measurement of student concern about affordability is derived from a question posed on the annual survey of American college freshmen:

Do you have any concern about your ability to finance your college education? (Mark one)
O None (I am confident that I will have sufficient funds)
O Some (but I probably will have enough funds)
O Major (not sure I will have enough funds to complete college)

This question was asked each year on the freshman survey between 1966 and 1989 and again in 1992 and 1994. Results have been published annually for all freshmen, men and women, and by institutional type and control.

Cross-tabulations with other student responses were requested for this analysis from the 1994 survey and another similar analysis done from 1992 data directly from the Higher Education Research Institute at UCLA. We are particularly grateful to Bill Korn at UCLA for preparing the set of special cross-tabs from the Fall 1994 freshman survey that provide the special gained through this analysis.

Astin, A. W., Korn, W. S., Sax, L. J., and Mahoney, K. M. December 1994. *The American Freshman: National Norms For Fall 1994.* Los Angeles: Cooperative Institutional Research Program: American Council on Education and University of California, Los Angeles.

Levels of Concern

In the 1994 Freshman Survey, 18.9 percent of all freshmen reported major concern about their ability to finance their higher education. Another 51.2 percent cited some concerns and the remaining 29.9 percent no concern.

As shown in the chart on the first page of this month's **OPPORTUNITY**, the 1994 freshman class had a larger share of students with major concerns about financing their higher educations than any class surveyed since 1966 when the Freshman Survey was initiated by Alexander Astin, then at the American Council on Education in Washington, DC.

The pattern over three decades is one of sharp growth in financial concern between 1968 and 1973, followed by slight decline through 1989, and most recently sharp increases in the 1992 and 1994 Surveys to the record high reached with the fall 1994 freshman class.

Although not shown in this analysis and report, the proportion of college freshmen reporting no concern about financing their higher educations reached a peak of 39 percent in 1974 (as the federal Basic Educational Opportunity Grant Program was implemented), and then dropped off to a record low of 29.9 percent in both the 1992 and 1994 freshmen classes.

In between those with major and no

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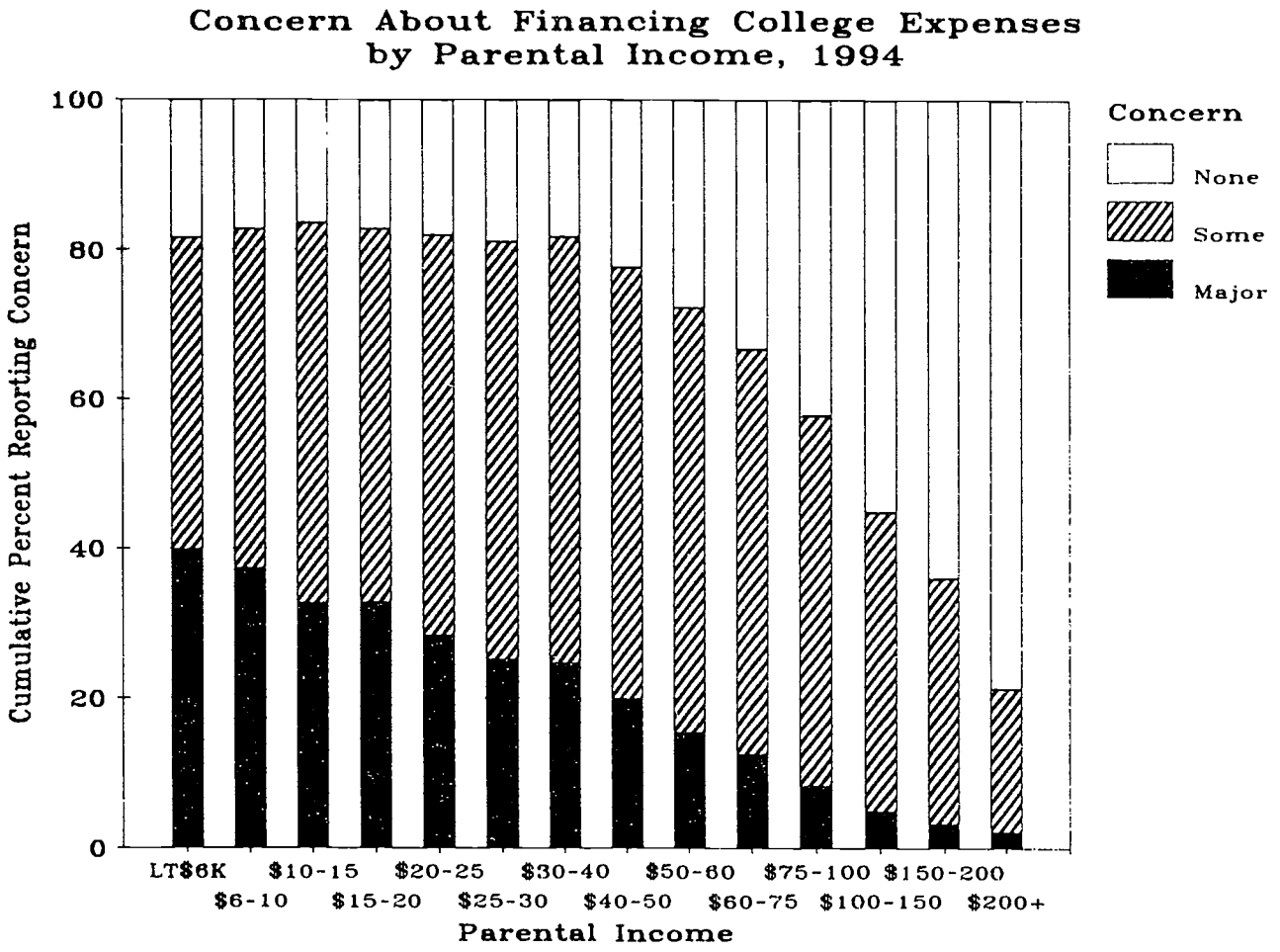
Mission Statement
This research letter is founded on two fundamental beliefs. First, sound public social policy requires accurate, current, independent, and focused information on the human condition. Second, education is essential to the development of human potential and resources for both private and public benefit. Therefore, the purpose of this research letter is to inform those who formulate, fund, and administer public policy and programs about the condition of and influences that affect postsecondary education opportunity for *all* Americans.



concerns is a vast middle group that reports some concern about ability to finance their higher educations. This is about half of all college freshmen. This group appears to be precariously perched between just being able to make it if nothing goes wrong, and perhaps in trouble if something goes astray in college financial planning.

Concern by Parental Income Levels

For this analysis we have examined detailed cross-tabulations of concern for financing higher education by a variety of freshman characteristics likely to be related to this concern, several of which are reported here. By far the most important of these in differentiating the freshmen class cohort by level of concern is parental income.

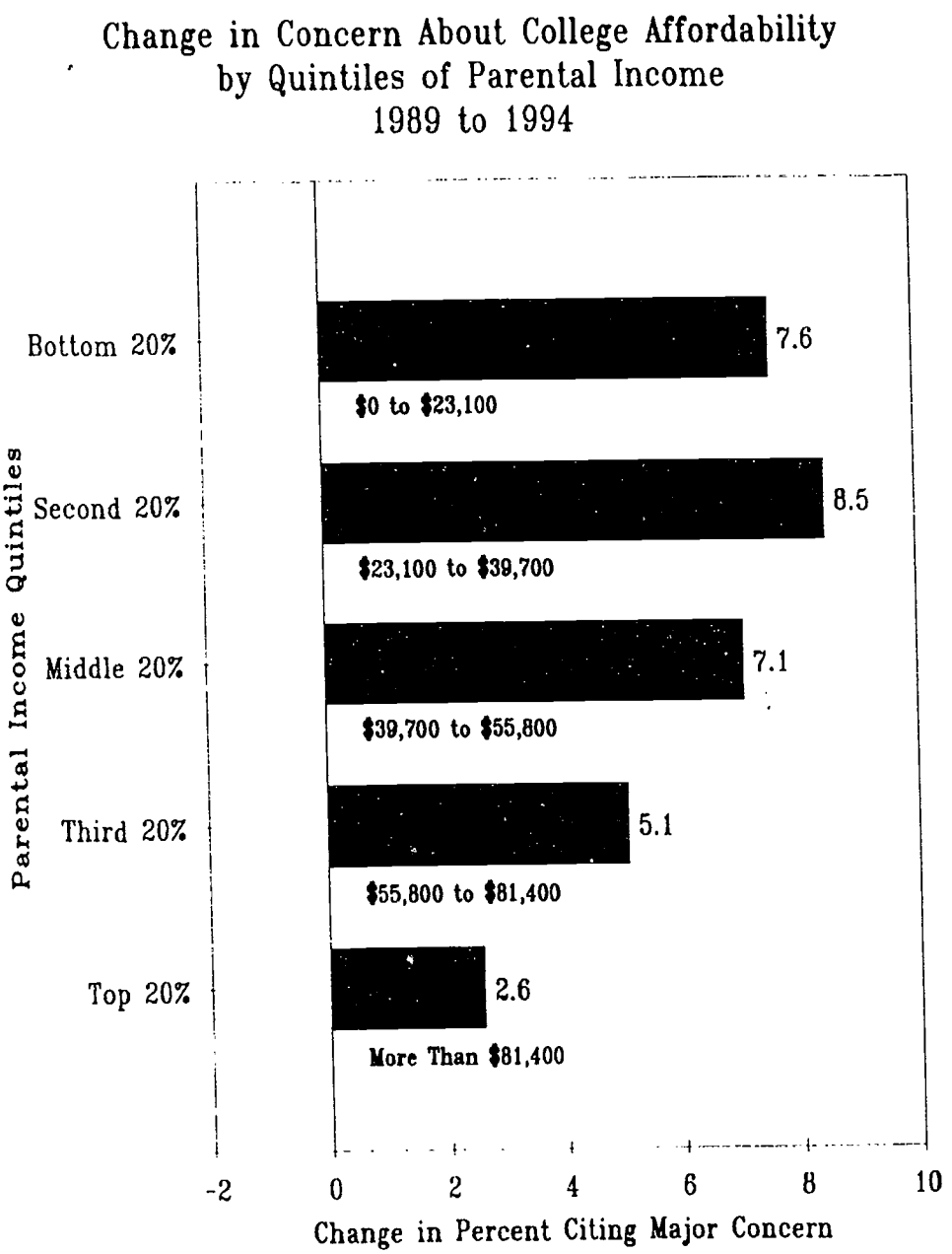
The UCLA Freshman Survey data report a negative relationship between concern about affordability and parental income:

- Concern about financing higher education is greatest among those from lowest parental income levels. About 40 percent of all freshmen from families with incomes below $6000 per year doubted their ability to financing their higher education with available funding.
- Concern about ability to finance their higher educations is least among those from the highest levels of parental income. For freshmen reporting parental incomes above $200,000 per year, 2.1 percent cited a major concern.

The proportion of freshmen citing major concerns about affordability declines directly with parental income as shown in the above chart.

At a second level, just over half--51.2 percent--of all freshmen cite some concern about their ability to finance their higher educations. By level of parental income, this rises from about 42 percent of those from parental incomes levels below $6000 per year, to a peak of nearly 58 percent for those from families with incomes of $40,000 to $50,000 per year, then drops off to 19 percent for those from families with incomes of more than $200,000 per year.

Finally, about 30 percent of all freshmen report no concern about their ability to finance their higher educations. By parental income, this is less than 20 percent for freshmen from all parental income levels up to $40,000 per year. As incomes rise above this point, the proportion of freshmen without



financial concerns begins to drop. Above $100,000 per year in parental income, more than half of all freshmen have no concern. Over $200,000 in parental income, about 79 percent of all freshmen report no concerns.

Change by Parental Income

Between 1989 and 1994, the proportion of all college freshmen reporting major concern about their ability to finance their higher educations increased by 5.8 percent. However, this increase was not shared equally across all levels of parental income.

We have divided the 1989 and 1994 American college freshman population into equal twenty percent intervals, or quintiles, of parental income. These quintiles were defined by the parental income intervals shown in the chart on this page.

We then computed the number of freshmen in each quintile citing major concern about ability to finance their higher educations, and calculated the proportion citing major concern. Finally we have compared the proportion in 1994 in each quintile with the same 1989 quintile. The differences are shown in the chart on this page.

Between 1989 and 1994, major concern about college affordability increased by more than the increase for the total freshman population in the bottom three quintiles, and by less than the overall increase in the top two quintiles.

The cost shift from taxpayers to students has its greatest negative impact in these bottom three quintiles of parental income. Here, student financial aid is most important, and when costs and cost increases are not covered by increased student financial aid for those who need aid, an increase in anxiety for those still able to enroll in college is predictable.

Institutional Type and Control

Freshmen in different types of collegiate institutions express concern about their ability to finance their higher educations to different degrees. Generally freshmen in black colleges--both public and private--are most likely to express serious concerns, and freshmen in universities--both public and private--are least likely to have serious concerns about college affordability.

Because prices quoted students vary markedly between public and private institutions, the similarity in levels of concern not by institutional control but by institutional type offers additional insight. The median family incomes of students are closely related to the type--not control--of the higher educational institution they attend. Generally, the students from the

highest family income backgrounds are enrolled in universities, public or private. Students enrolled in two-year colleges tend to have the lowest family income backgrounds.

This relationship is driven not so much by price as it is institutional admissions standards.

- The most academically selective institutions tend to enroll students from the highest income families. Freshmen from these affluent families are best able to afford the higher prices charged at these pricier institutions. Thus, relatively few express serious concern about their ability to finance their higher educations.
- The least academically selective institutions tend to serve students from much lower income family backgrounds where limited ability to pay and deteriorating student financial aid programs naturally raise anxiety levels.

For the freshman class of 1994, median family incomes for those entering first-time, full-time by institutions type and control were as follows:

Private universities	$72,769
Public universities	$57,540
Nonsectarian 4-year colleges	$54,685
Catholic 4-year colleges	$53,689
Protestant 4-year colleges	$49,375
Public 4-year colleges	$47,090
Private 2-year colleges	$44,821
Private black colleges	$37,647
Public 2-year colleges	$37,226
Public black colleges	$26,882

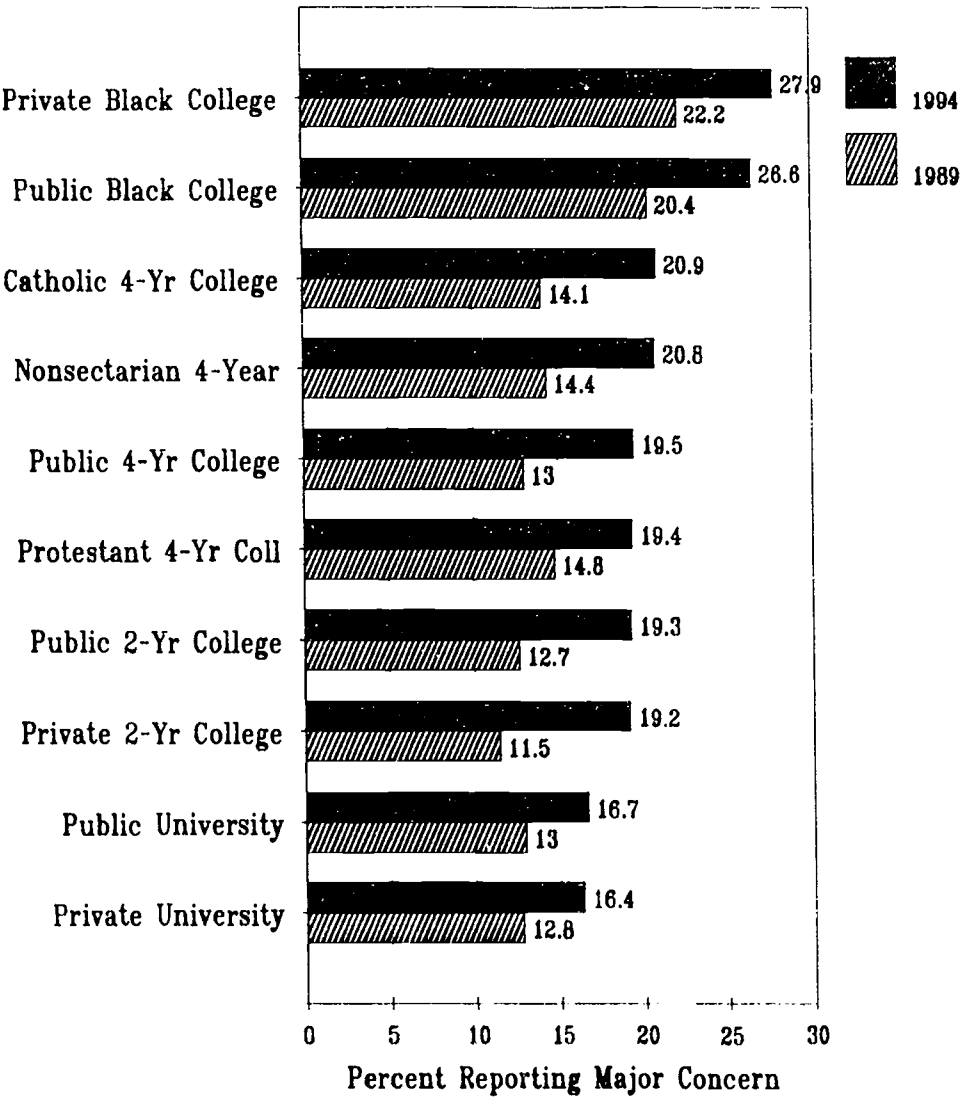
Between 1989 and 1994, the proportion of college freshmen with major concerns about their ability to finance their higher educations increased in institutions of all types and controls. However, because each institutional type tends to draw its students from a particular portion of the parental income distribution, the increase varied across different types of institutions.

- The increase in major concerns about ability to finance higher educations was least in the universities--both public and private--that have the highest median family incomes.
- The increase in concern was greatest at private 2-year colleges, and was somewhat less at other colleges--both public and private--that serve students from families with incomes below those of the universities.

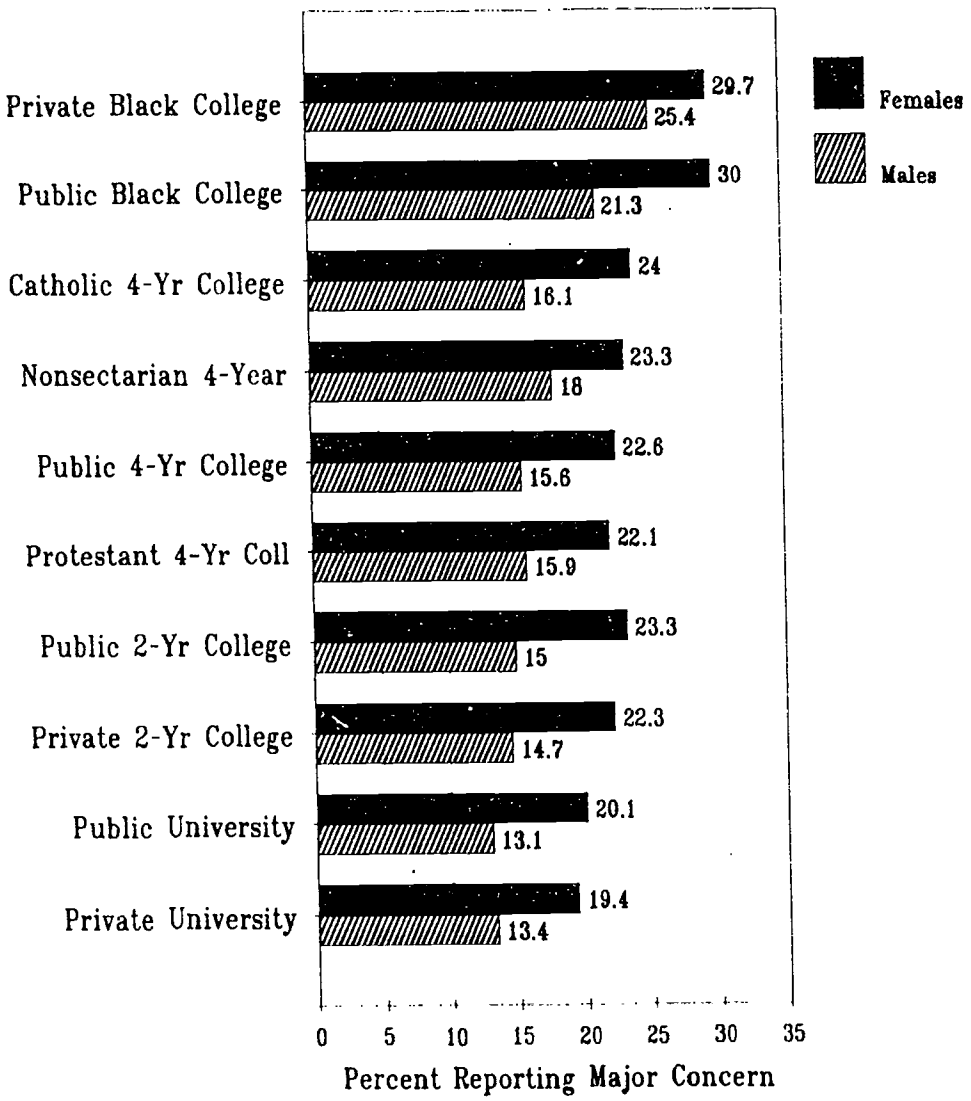
Gender

Males and females appear to have quite different levels of anxiety when it comes to financing their higher education. For the 1994 class of freshmen in American higher education, 15.0 percent of all males said they had a major concern about financing their higher educations, compared to 24.5 percent for females. For the males 48.8 percent said they had some concerns, compared to 53.3

Major Concern About Financing College by Type and Control of Institution 1989 and 1994



Major Concern About Financing College by Gender and Type of Institution 1994



percent for females. Only 22.2 percent of the females had no concerns, compared to 36.2 percent for males.

This difference between men and women college freshmen persists across institutions of all types and controls, as shown in the chart on this page. Generally the pattern from the previous chart holds true here also: major concerns about college affordability are greatest in the black colleges and least in the universities for both men and women.

Within institutional type and control, the differences between women and men in their concern about financing higher education vary little, from 4.3 percent in private black colleges to 8.7 percent in public black colleges. Between the predominantly whites colleges, the range was from 5.3 percent at nonsectarian 4-year colleges to 8.3 percent in public 2-year colleges.

Between 1989 and 1994, the anxiety level about college affordability rose much faster for women than it did for men. The proportion of male freshmen citing major concern about financing their higher educations rose by 1.9 percent, while it rose by 7.1 percent for women.

We have attempted to explore the causes of the differences in anxiety about college affordability between men and women about college affordability through traditional economic principles:

- Parental income backgrounds, and
- Future income prospects.

Here is what we found.

First, in the fall of 1994 male college freshmen reported median parental incomes of $50,081, compared to $45,120 for females. Because women are both graduating from high school at higher rates than men, and going on to college at higher rates than male high school graduates, women college freshmen probably represent a broader spectrum of family incomes than do men.

Thus more women than men from lower income families are likely to be present in higher education.

Second, in the 1992 *Current Population Survey* (P60-184), median annual income of males 25 to 34 years with a bachelor's degree was $31,119, compared to $23,604 for females. Even when this is limited to those working year-round, full-time basis, median income for males was $34,648 compared to $27,097 for females.

Thus, college offers different payoffs for each gender. Furthermore, when increasing levels of educational debt are factored into the investment decision, the rate of return on a college investment decision is much lower for women than it is for men.

Race and Ethnicity

College freshmen from different racial/ethnic groups report quite different levels of concern about their abilities to finance their higher educations. Generally, Hispanics have the highest anxiety levels and whites the lowest.

As shown in the chart on this page, all three Hispanic groups tabulated in the UCLA Freshman Survey reported greater concerns about affordability than were reported by any other group. The proportion of Hispanic freshmen reporting major concern was more than twice that of whites.

Between 1992 and 1994, concern about college affordability increased for all groups except blacks. The *increase in concern* was greatest where the *level of concern* was greatest--among all three Hispanic groups.

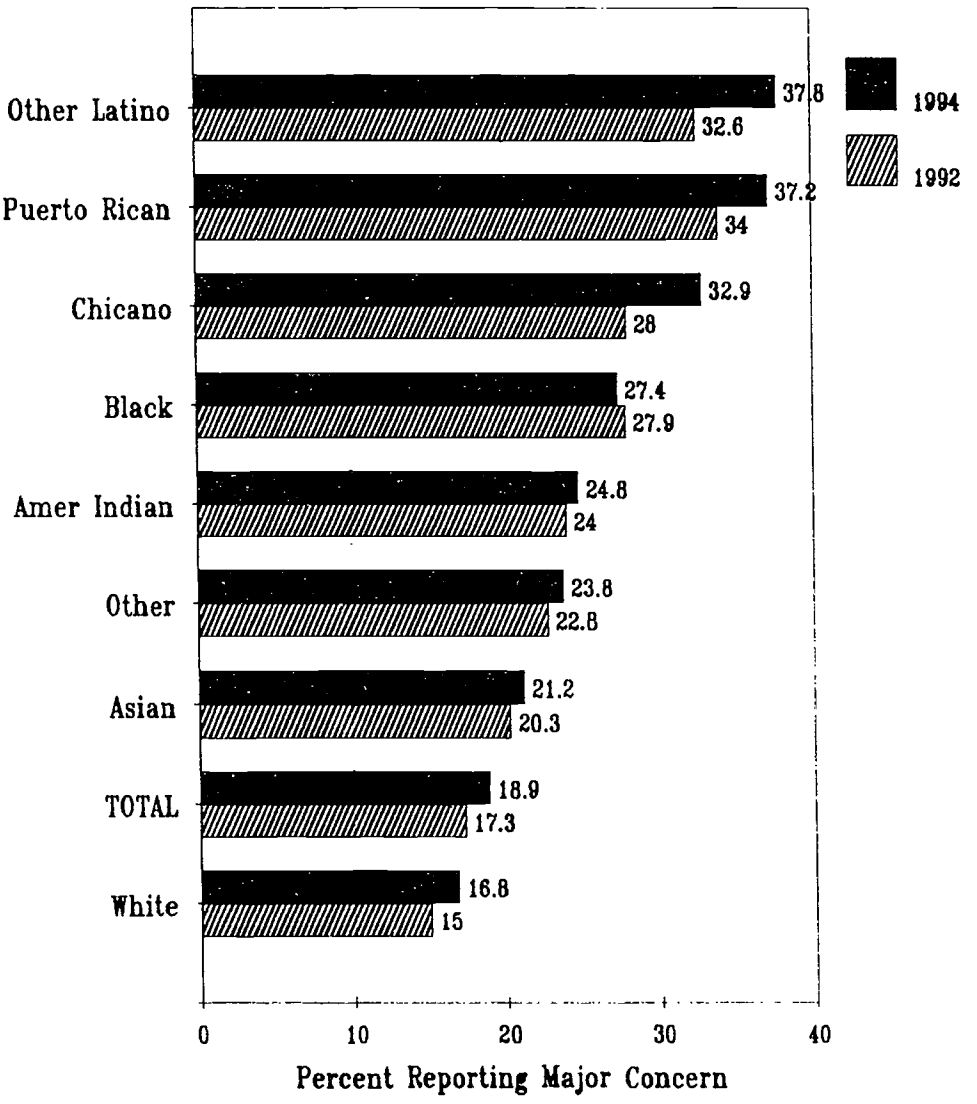
To try to understand the source of anxiety the minority freshmen, we revert to our traditional economic principles--family income background and future income prospects--and we add a third economic concept: risk.

First, as shown previously, concern about college is negatively related to parental income. Thus, students from lower family income backgrounds are more likely to be anxious about their abilities to finance their higher educations.

For fall 1994 college freshmen, median parental incomes by racial/ethnic group from the UCLA Freshman Survey were:

White	$50,397
Asian	$49,684
Other race	$44,034
American Indian	$39,727
Chicano	$30,730
Puerto Rican	$28,841
Blacks	$26,667
Other Latino	$25,638

Major Concern About Financing College by Race/Ethnicity of College Freshmen 1992 and 1994



Second, with increasing emphasis on repayable federal educational loans to finance higher education for students from low and middle income family backgrounds, the potential earnings of college graduates enters the private investment decision. According to the *Current Population Survey* (P60-184), in 1992 median annual earnings for males and females age 25 to 34 years with baccalaureate degrees by race were as follows:

Males:	
White	$31,669
Black	$24,416
Hispanic	$26,258
Females:	
White	$24,142
Black	$22,717
Hispanic	$23,094

Thus, controlling for gender differences, minorities are likely to earn less to repay their federal educational loans after college than are

majority whites. As college attendance costs increase faster than incomes and student grant aid, increasing educational loan repayment obligations affect borrowers with more limited income prospects more than those who have greater earnings prospects after college or those who do not have to borrow to finance their higher educations.

Third, not all students who start college leave later with a degree. As loans replace grant assistance, the risk factor of not graduating from college and not earning the higher incomes of college graduates to repay educational loans enters the private investment decision calculation.

Here we go back to the *Current Population Reports* (P20-476) from the Census Bureau to determine this risk factor. Specifically, we examine the proportion of the population age 25 to 29 years that, having started college, has completed a baccalaureate degree. Baccalaureate degree *completion* rates for the major racial/ethnic groups in 1992 were as follows:

Whites	49.7%
Blacks	31.1%
Hispanics	33.2%

Viewed as an economic investment decision, minorities are legitimately more concerned about their abilities to finance their higher educations than whites because they come from lower income families and are more dependent on student financial aid, are likely to earn less than whites when they graduate and enter the labor market, and are less likely than whites to earn a baccalaureate degree when they start college.

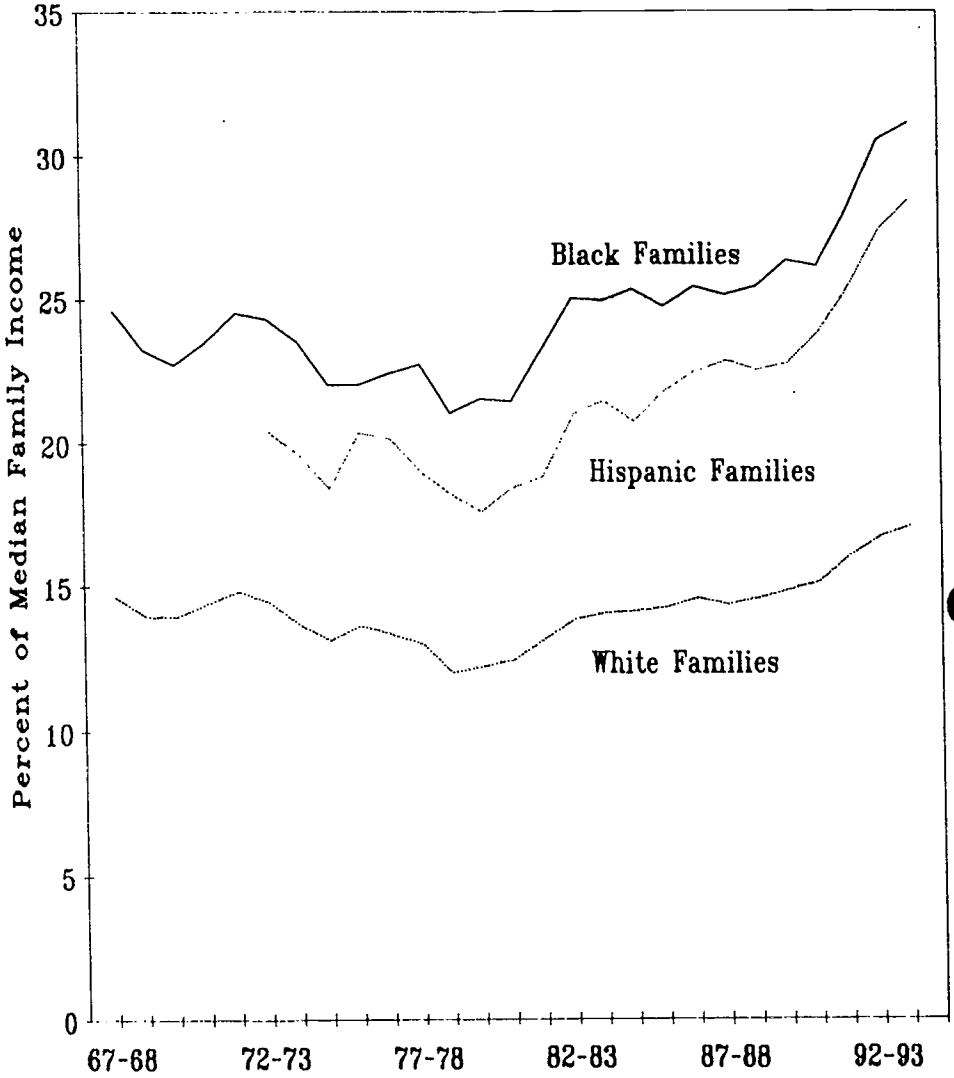
Conclusions

Concerns are clearly growing among American college freshmen about the affordability of their higher educations. The concerns are widespread. They are expressed by all students, at all types of institutions, for both genders, for all racial/ethnic groups.

But more than any other factor, concerns about college affordability are related to limited family income. This relationship is direct and causal. As costs of higher education are shifted from taxpayers to students (as they have been for the last 15 years), and as higher education becomes increasingly important to securing the better paying jobs in the economy, (as has been the case for the last 20 years) economically marginal populations drawn to higher education will become increasingly dependent on financial aid to help pay college costs.

To illustrate the growing importance of financial aid to families, we adapted the above chart from similar charts developed by Larry Gladieux and Jacq King of The College Board. This chart helps illustrate--quite starkly--the growing importance of financial aid to help families pay for higher education.

Public University Charges for Tuition, Fees, Room & Board as a Percent of Median Family Income by Race/Ethnicity 1967-68 to 1993-94



Private Correlates of Educational Attainment

Education influences our private lives in ways both direct and subtle. At the very least it must be said that people who are better educated live lives that are often quite different than those who are less well educated. Most people would agree that the differences enjoyed by the better educated improve the quality of life. Some of these differences are caused directly by education: the greater incomes of the college educated offer choices about what do in life not available to those with lower incomes limited by lesser educational attainment. Other differences in lives are caused by choices made by individuals that reflect differences in factual knowledge, discerning processes of judgement, cultivated values and other outcomes from advanced levels of education.

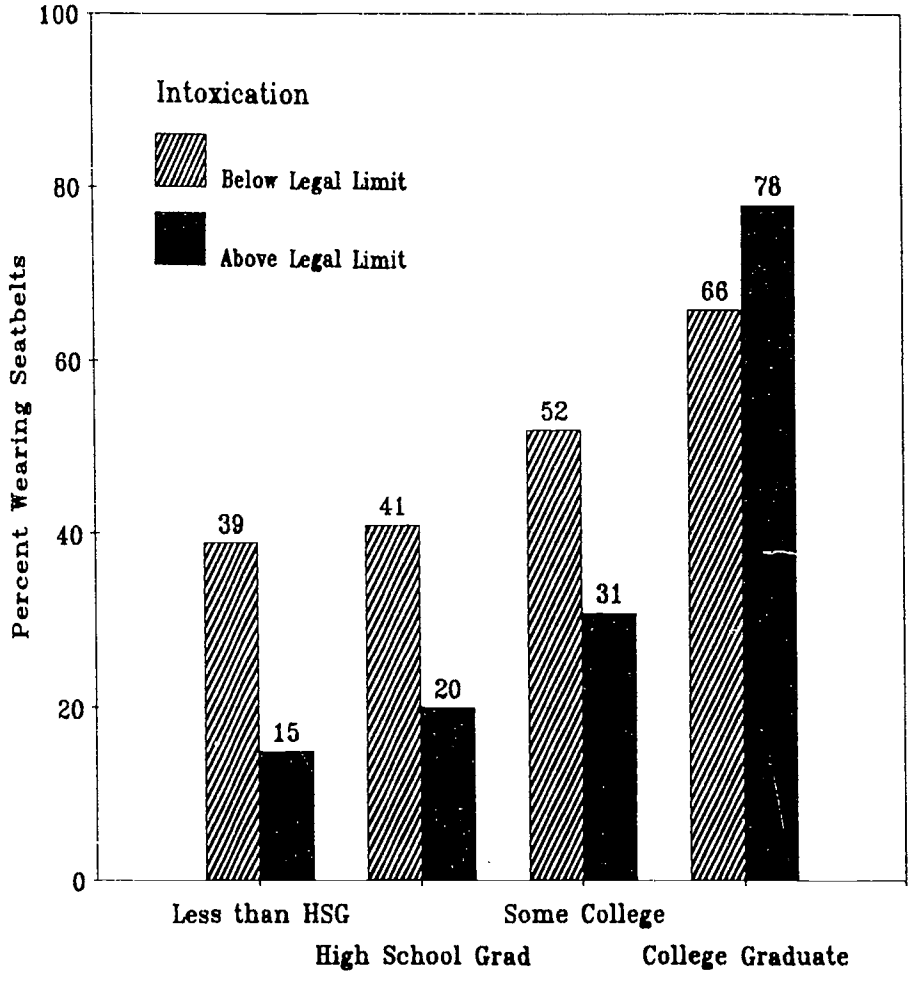
Here we report our compilation of the differences in the lives of adults with different levels of educational attainment. Our attempt here is not to be complete, but rather to illustrate the very broad range of important differences in the lives of adults with different levels of educational attainment.

Even the most cursory review of this compilation reveals large differences in the lives of those with greater levels of educational attainment compared to those of the less well educated. People with the most education tend to live longer, healthier, happier and more productive lives than others with the least education.

Our review of data for this report is based largely on data published in two sources: the *Statistical Abstract of the United States* and *American Demographics* magazine. The sharp-eyed editors of each source are clearly sensitive to the power of educational attainment in differentiating important aspects of the lives of American adults. In a few cases, we have used data from other sources. All sources are referenced to their original organization and/or publication for those who might wish to explore these relationships further.

There are analogous social correlates to educational attainment as well, which are not developed here. The most obvious are related to income and have been noted in previous issues of OPPORTUNITY. States with better educated adult populations have higher per capita personal incomes. The higher incomes of the better educated provide most of the government tax revenues that are collected from taxpayers and then allocated by government to social welfare programs for the less well educated (e.g. corrections, Aid to Families with Dependent Children, cash assistance, Supplemental Security Income, Food Stamps, housing assistance and Medicaid).

Wearing Seatbelts and Driving Drunk
1990



Private Correlates of Educational Attainment

Postsecondary Education OPPORTUNITY

Correlate	Educational Attainment: Less Than HSG	High School Graduate	Some College	Bachelor's Degree or More	Source
Population					
Educational Attainment of Population 25 Years and Over (1993)(% Distribution)					Bureau of the Census. *Current Population Reports*, P20-471, 459, and *1990 Census*.
Total					
White	18.5%	35.6%	23.3%	22.6%	
Black	29.6%	36.3%	22.0%	12.2%	
Asian	15.8%	24.9%	17.2%	42.0%	
Arab-Americans	17%	21%	27%	35%	
Male					
Female					
Educational Attainment of Hispanics 25 Years and Over (1993)(% Distribution)					Bureau of the Census. *Current Population Reports*, P20-475.
All Hispanics	46.9%	44.1%		9.0%	
Mexican	53.8%	40.3%		5.9%	
Puerto Rican	40.2%	51.8%		8.0%	
Cuban	37.9%	45.6%		16.5%	
Central/South American	37.1%	47.8%		15.1%	
Other Hispanic	31.1%	53.8%		15.1%	
Employment and Unemployment					
Civilian Labor Force 25 Years and Over					Bureau of Labor Statistics
Civilian labor force (1993)(000)	12,360	37,821	28,413	29,062	
Labor force participation rate (1993)					
Total	39.7%	65.4%	75.0%	81.0%	
Male	52.8%	77.0%	83.4%	86.3%	
Female	28.3%	56.0%	67.7%	74.9%	
White	40.1%	64.8%	74.4%	80.8%	
Black	37.1%	69.9%	79.7%	84.8%	
Hispanic	55.7%	73.2%	81.6%	83.7%	
Worklife Expectancy at Birth (1979-80)					Bureau of Labor Statistics. *Monthly Labor Review*, August 1985.
Male	34.6 yrs	39.9 yrs		41.1 yrs	
Female	22.3 yrs	30.1 yrs		34.9 yrs	
Percent of Life Economically Active from Birth (1979-80)					Bureau of Labor Statistics. *Monthly Labor Review*, August 1985.
Male	49%	57%		59%	
Female	29%	39%		45%	
Unemployment Rates (1991)					Bureau of Labor Statistics
Total	11.0%	5.9%	4.8%	2.8%	
Males	11.0%	6.4%	4.9%	2.8%	
Females	10.9%	5.4%	4.7%	2.8%	
Whites	10.3%	5.4%	4.2%	2.7%	
Blacks	14.7%	9.9%	8.8%	4.1%	
Use Computers at Work (1993)	9.5%	34.1%	50.9%	67.4%	*Quarterly Journal of Economics.*

Correlate	Educational Attainment				Source
	Less Than HSG	High School Graduate	Some College	Bachelor's Degree or More	
Income, Benefits and Wealth					
Median Income of Persons (1993)					Bureau of the Census. *Current Population Reports*, P60-188.
Total					
Males	$14,550	$21,782	$26,323	$41,649	
Females	$7,187	$11,089	$14,489	$25,246	
Year-Round, Full-Time Workers					
Male	$21,752	$27,370	$32,077	$47,740	
Female	$15,386	$19,963	$23,056	$34,307	
Total Money Income of Families (1993)					Bureau of the Census. *Current Population Reports*, P60-188.
Median	$22,224	$33,674	$40,736	$64,941	
Mean	$28,013	$39,242	$46,526	$80,098	
Spending by Consumer Units (1992)					Bureau of Labor Statistics. *1992 Consumer Expenditures Survey.*
Consumer Units (000)	24,191	29,622	23,499	22,706	
Average Income After Taxes	$17,741	$28,115	$30,639	$48,246	
Average Total Spending	$18,240	$26,924	$31,221	44,237	
Food	$3,231	$4,129	$4,353	$5,340	
Food at Home	$2,403	$2,669	$2,509	$2,950	
Food Away from Home	$828	$1,460	$1,844	$2,391	
Housing	$5,920	$8,340	$9,751	$14,393	
Shelter	$3,159	$4,549	$5,678	$8,658	
Utilities/Public Services/Fuels	$1,693	$2,010	$1,927	$2,318	
Household Operations	$201	$354	$462	$990	
Housekeeping Supplies	$305	$400	$448	$574	
Furnishings/Equipment	$561	$1,027	$1,236	$1,852	
Apparel and Services	$922	$1,397	$1,877	$2,705	
Men's and Boys'	$220	$344	$520	$736	
Women's and Girls'	$341	$564	$743	$1,082	
Children Under 2	$62	$83	$76	$87	
Footwear	$177	$208	$229	$311	
Other Products/Services	$122	$198	$309	$488	
Transportation	$3,207	$5,188	$5,739	$6,901	
Vehicle Purchase (net outlay)	$1,271	$2,269	$2,494	$2,745	
Gasoline and Motor Oil	$749	$1,016	$1,027	$1,101	
Other Vehicle Expenses	$1,052	$1,694	$1,912	$2,507	
Public Transportation	$135	$209	$306	$547	
Health Care	$1,515	$1,521	$1,516	$2,305	
Health Insurance	$689	$733	$650	$833	
Medical Services	$393	$422	$533	$801	
Drugs and Medical Supplies	$432	$346	$333	$402	
Entertainment	$680	$1,338	$1,670	$2,398	
Personal Care	$237	$361	$433	$515	
Reading	$76	$138	$169	$276	
Education	$119	$215	$579	$868	
Alcohol	$149	$252	$366	$441	
Tobacco and Smoking Supplies	$306	$360	$241	$165	
Miscellaneous	$405	$684	$853	$1,155	
Cash Contributions	$393	$634	$905	$2,039	
Personal Insurance/Pensions	$1,081	$2,367	$2,770	$5,006	

Correlate	Educational Attainment				Source
	Less Than HSG	High School Graduate	Some College	Bachelor's Degree or More	
Money Income of Families (1992) (Percent Distribution within Quintile)					Bureau of the Census. *Current Population Reports*, P60-184.
Lowest Fifth	41.3%	19.1%	13.5%	4.2%	
Second Fifth	29.9%	23.3%	17.9%	8.4%	
Third Fifth	16.0%	24.2%	23.4%	14.7%	
Fourth Fifth	8.7%	21.1%	24.9%	25.3%	
Highest Fifth	4.0%	12.2%	20.4%	47.4%	
Top 5 Percent	0.6%	1.6%	3.6%	15.7%	
Health Insurance Coverage (1987-89)					Bureau of the Census. *Current Population Reports*, P70-29.
Government or Private					
For Entire Period	72.8%	74.9%		85.5%	
For Part of the Period	21.0%	21.8%		12.8%	
No Coverage	6.2%	3.3%		1.5%	
Private for Entire Period	48.1%	68.4%		82.6%	
Household Wealth (1991)					Bureau of the Census. *Household Wealth and Asset Ownership: 1991*, Current Population Reports, P70-34.
Median Net Worth	$23,586	$33,254	$31,081	$72,373	
Households Owning Asset Types:					
Interest Earning Assets in Institutions	54.8%	72.1%	78.3%	89.1%	
Other Interest Earning Assets	3.5%	6.1%	8.1%	19.9%	
Regular Checking Accounts	37.0%	47.3%	51.2%	48.6%	
Stocks, Mutual Fund Shares	7.9%	16.7%	22.6%	38.2%	
Own Business or Profession	6.5%	10.9%	12.8%	17.3%	
Motor Vehicles	73.3%	88.2%	90.7%	93.3%	
Own Home	59.5%	65.9%	62.6%	70.7%	
Rental Property	6.2%	7.6%	8.7%	14.5%	
Other Real Estate	7.2%	9.5%	11.5%	15.3%	
Mortgages	1.4%	1.7%	1.9%	3.3%	
U.S. Savings Bonds	8.2%	17.1%	22.3%	25.7%	
IRA/KEOGH Accounts	9.3%	19.2%	22.7%	42.8%	
Other Assets	1.1%	1.7%	2.7%	6.2%	
Median Value Assets for Asset Owners:					
Interest Earning Assets in Institutions	$3,907	$2,860	$2,716	$5,322	
Other Interest Earning Assets	$12,776	$14,773	$17,921	$18,179	
Regular Checking Accounts	$394	$422	$554	$800	
Stocks, Mutual Fund Shares	$8,154	$5,044	$4,151	$7,347	
Equity in Business or Profession	$11,854	$13,239	$6,490	$9,057	
Equity in Motor Vehicles	$3,340	$5,037	$5,260	$7,084	
Equity in Own Home	$39,141	$41,334	$40,772	$55,310	
Rental Property Equity	$17,644	$30,344	$32,581	$44,892	
Other Real Estate Equity	$18,885	$21,335	$25,221	$27,342	
U.S. Savings Bonds	$555	$713	$655	$819	
IRA/KEOGH Accounts	$11,233	$10,338	$10,843	$12,971	
Other Assets	$25,410	$17,031	$15,513	$22,548	
Attitude Toward Financial Risk (1983)					Federal Reserve System. *1983 Survey of Consumer Finances.*
Percent Willing to Take Financial Risk	34%	54%	63%	78%	

Correlate	Educational Attainment				Source
	Less Than HSG	High School Graduate	Some College	Bachelor's Degree or More	
Poverty, Welfare, and Dependency					
Families Below Poverty Level (1992)					Bureau of the Census. *Current Population Reports*, P-60-185.
Total	24.1%	11.0%	7.2%	2.2%	
White	19.3%	8.4%	5.5%	1.8%	
Black	44.2%	28.4%	19.2%	4.7%	
Hispanic	35.5%	19.4%	12.9%	6.6%	
Participation in Government Assistance Programs (1988)					Bureau of the Census. *Current Population Reports*, P70-31.
Average Monthly Participation					
Total	20.5%	7.4%	2.8%		
AFDC, Cash Assistance	5.0%	2.1%	0.6%		
Supplemental Security Income	6.0%	1.3%	0.5%		
Food Stamps	11.6%	3.8%	1.0%		
Housing Assistance	6.7%	2.9%	1.3%		
Medicaid	13.1%	4.2%	1.4%		
Ever Participated in Assistance Programs					
Total	24.3%	10.2%	4.6%		
AFDC, Cash Assistance	6.6%	3.2%	1.0%		
Supplemental Security Income	6.3%	1.4%	0.5%		
Food Stamps	15.0%	5.8%	2.0%		
Housing Assistance	15.7%	5.6%	2.1%		
Medicaid	8.1%	4.0%	1.8%		
Health					
Life Expectancy (1960) (Years of Life Remaining at Age 25					Kitagwa and Hauser. *Differential Mortality in the United States.* 1973.
White Males	45.6 yrs	46.0 yrs	47.1 yrs		
White Females	53.4 yrs	52.2 yrs	56.4 yrs		
Women's Health Practices (1990)					National Center for Health Statistics. *Health Promotion and Disease Prevention, United States 1990, Vital and Health Statistics.*
Age 18 Years and Over					
Had Professional Breast Exam	43.0%	52.2%	59.7%		
Knew How to do Breast Self-Exam	76.0%	89.7%	92.8%		
Did Breast Self-Exam Monthly	43.9%	43.6%	42.2%		
Had a Pap Smear	37.9%	49.6%	57.2%		
Age 35 Years and Over					
Ever Had a Mammogram	44.9%	59.0%	65.5%		
Had Mammogram in Past 3 Years	37.4%	51.8%	58.5%		
Personal Health Practices (1990)					National Center for Health Statistics. *Health Promotion and Disease Prevention, United States 1990, Vital and Health Statistics.*
Eats Breakfast Almost Every Day	58.6%	52.6%	58.8%		
Rarely Snacks	26.9%	24.0%	26.4%		
Exercised/Played Sports Regularly	25.9%	37.0%	52.1%		
Had Two or More Drinks on Any Day	5.1%	5.9%	5.4%		
Current Smoker	31.8%	29.6%	18.3%		
20%/More Above Desirable Weight	32.7%	28.6%	23.8%		
Customers for Vitamin Supplements (1992)	34%	39%	41%	47%	Louis Harris & Associates, for *Prevention* magazine.

Correlate	Educational Attainment				Source
	Less Than HSG	High School Graduate	Some College	Bachelor's Degree or More	
Wearing Seatbelts While Driving Intoxicated (1990)					American Journal of Public Health.
Below Legal Level of Intoxication	39%	41%	51%	66%	
Above Legal Level of Intoxication	15%	20%	31%	78%	
Personal Life					
Adult Education (1990-91)					National Center for Education Statistics. *Adult Education Profile for 1990-91.*
Participation Rate	14%	22%	39%	52%	
Reasons for Taking Course:					
Personal/Social	30%	31%	33%	28%	
Advance on the Job	43%	55%	53%	70%	
Train for a New Job	13%	13%	10%	6%	
Complete Degree or Diploma	16%	9%	19%	11%	
Multimedia Audiences (1993)					Mediamark Research, Inc. *Multimedia Audiences.*
Television Viewing	94.5%	94.1%	92.6%	91.4%	
Television Prime Time Viewing	84.7%	81.9%	78.1%	77.3%	
Cable Viewing	48.9%	62.1%	64.2%	64.3%	
Radio Listening	75.7%	85.7%	91.1%	90.5%	
Newspaper Reading	68.4%	84.9%	89.0%	93.8%	
Choose Among Three or Fewer Restaurant Chains When Eating Out (1992)	50%	56%	60%	50%	Roper Organization.
Fishermen and Hunters (1991) (Percent Distribution					Bureau of the Census and Fish and Wildlife Service. *1991 National Survey of Fishing, Hunting, and Wildlife-Associated Recreation.*
Fishing	17%	38%	22%	24%	
Hunting	18%	44%	21%	16%	
Participation in Leisure Activities at Least Once in Prior 12 Months (1992)					National Endowment for the Arts. *Arts Participation in America, 1982 to 1992.*
Exercise Program	39%	55%	71%	75%	
Playing Sports	18%	34%	49%	55%	
Camping, Hiking or Canoeing	21%	31%	42%	42%	
Home Improvement/Repair	34%	47%	53%	52%	
Reading Literature	32%	49%	65%	71%	
Attendance at Various Activities at Least Once in Prior 12 Months (1992)					National Endowment for the Arts. *Arts Participation in America, 1982 to 1992.*
Jazz Performance	2%	6%	14%	20%	
Classical Music Performance	3%	7%	14%	23%	
Opera	1%	1%	3%	6%	
Musical Play	5%	12%	21%	30%	
Non-musical Play	4%	8%	16%	23%	
Ballet	1%	2%	6%	9%	
Art Museums	7%	16%	35%	46%	
Historic Park	15%	26%	43%	52%	
Movies	35%	54%	21%	77%	
Sports Events	19%	33%	45%	51%	
Amusement Park	35%	51%	59%	58%	

Correlate	Educational Attainment				Source
	Less Than HSG	High School Graduate	Some College	Bachelor's Degree or More	
Music Preferences (1992)					National Endowment for the Arts.
Country/Western	53.5%	57%	50%	44%	
Mood/Easy Listening	26.5%	49%	56%	58%	
Rock	19.5%	42%	54%	53.5%	
Blues/Rhythm & Blues	20%	36%	50%	54.5%	
Big Band	21.5%	32%	37%	48%	
Jazz	12.5%	28%	42%	52%	
Classical	14%	25%	39%	58%	
Show Tunes/Operetta/Musicals	9.5%	22%	33%	45.5%	
Contemporary Folk	11%	20%	25%	34%	
Opera	5.5%	9%	14%	21%	
Book Purchasing (1992) (% Distribution)					Book Industry Study Group. *1991-92 Consumer Research Study on Book Purchasing.*
Total	8.2%	52.4%	39.4%		
Mass Market (pocket size, mass merch)	11.6%	60.3%	28.1%		
Trade (all other paperbound books)	5.0%	44.2%	50.8%		
Hardcover	6.2%	49.4%	44.4%		
Gun Ownership (1993)					Bureau of Justice Statistics. *Sourcebook of Criminal Justice Statistics.*
Total	47%	46%	38%		
Pistol	18%	25%	24%		
Shotgun	30%	32%	22%		
Rifle	27%	27%	20%		
Consumer Purchases of Sporting Goods (1992) (% Distribution)					*The Sporting Goods Market in 1993.* National Sporting Goods Association.
Aerobic Shoes	7%	26%	30%	37%	
Gym Shoes/Sneakers	7%	30%	31%	32%	
Jogging/Running Shoes	5%	21%	29%	45%	
Walking Shoes	9%	28%	28%	33%	
Fishing Tackle	9%	27%	33%	30%	
Camping Equipment	6%	23%	34%	37%	
Exercise Equipment	6%	24%	23%	47%	
Hunting Equipment	8%	28%	35%	28%	
Team Sports Equipment	3%	22%	32%	43%	
Golf Equipment	3%	15%	27%	54%	
Family Life					
Women Who Have Had a Child in the Last Year (1992)					Bureau of the Census. *Current Population Reports*, P20-454.
Women 15 to 44 Years Old					
Total Births per 1000 Women	67	65	58	62	
First Births per 1000 Women	24	25	24	28	
Women 15 to 29 Years Old					
Total Births per 1000 Women	79	113	75	69	
First Births per 1000 Women	33	50	38	45	
Women 30 to 44 Years Old					
Total Births per 1000 Women	40	33	49	60	
First Births per 1000 Women	4	7	13	20	
Birthing Center Utilization (1985-87) (Percent Distribution)					*New England Journal of Medicine*, December 28, 1989.
Births at Birth Centers	12.4%	32.3%	23.5%	31.8%	
All Births	15.5%	43.7%	22.1%	18.7%	

Correlate	Educational Attainment				Source
	Less Than HSG	High School Graduate	Some College	Bachelor's Degree or More	
Living Arrangements of Children Under 18 Years by Parental Educational Attainment (1993)(Percent Distribution)					Bureau of the Census. Unpublished data.
All Races	18.0%	34.6%	25.1%	22.3%	
Living with Both Parents	13.9%	33.1%	25.5%	27.4%	
Living with Mother Only	29.1%	38.3%	24.5%	8.2%	
Living with Father Only	25.4%	40.1%	20.6%	13.9%	
White	16.6%	33.7%	25.6%	24.2%	
Living with Both Parents	13.6%	32.9%	25.9%	27.9%	
Living with Mother Only	27.8%	35.8%	26.4%	10.0%	
Living with Father Only	25.4%	39.8%	21.2%	13.8%	
Black	25.1%	42.2%	23.6%	9.1%	
Living with Both Parents	16.2%	41.0%	27.9%	17.3%	
Living with Mother Only	30.9%	43.1%	21.0%	5.0%	
Living with Father Only	26.1%	41.9%	18.9%	12.4%	
Hispanic	51.9%	26.6%	15.1%	6.4%	
Living with Both Parents	50.8%	25.6%	15.9%	7.7%	
Living with Mother Only	54.1%	29.4%	13.2%	3.4%	
Living with Father Only	53.7%	23.3%	15.9%	7.1%	
Primary Child Care Arrangements Used by Employed Mothers for Children Under 5 Years (1991) (Percent Distribution by Mother's Education)					Bureau of the Census. *Current Population Reports*, P70-36.
Care in Child's Home	45.2%	34.3%	35.6%	34.1%	
Care in Another Home	35.3%	33.2%	31.5%	25.0%	
Day/Group Care Center	8.5%	15.9%	17.0%	17.2%	
Nursery/Pre-school	6.4%	4.1%	8.1%	11.7%	
Mother Cares for Child	2.9%	10.2%	6.4%	11.1%	
Other Arrangements	1.7%	2.3%	0.5%	0.9%	
Married Fathers Caring for Their Children (1993)					*National Survey of Families and Households.*
3 Hours Per Day Caring for Preschooler	36%		22%		
Play with Children Almost Every Day					
Oldest Child Younger than 5	77%		79%		
Oldest Child 5 to 18	18%		16%		
Help Children Learn Almost Every Day					
Read to Children Under 5	17%		36%		
Help with Homework Oldest 5 to 18	45%		61%		
Praise Children Very Often					
Oldest Child Younger than 5	77%		85%		
Oldest Child 5 to 18	46%		61%		
Yell at the Children Sometimes or Often					
Oldest Child Younger than 5	49%		47%		
Oldest Child 5 to 18	58%		57%		
Absentee Fathers Visits to Child (1993)					*National Survey of Families and Households.*
None	21.7%		20.0%		
One to Several Times per Year	23.2%		32.2%		
One to Several Times per Month	24.2%		16.5%		
One or More Times per Week	27.3%		27.2%		

Correlate	Educational Attainment				Source
	Less Than HSG	High School Graduate	Some College	Bachelor's Degree or More	
Lifetime Births Expected by Women 18 to 34 Years Old (1992)					Bureau of the Census. *Current Population Reports*, P20, unpublished data.
Births to Date per 1000 Women	1776	1325	887	644	
Future Births Expected per 1000 Women	616	718	1171	1389	
Lifetime Births Expect per 1000 Women	2393	2043	2058	2033	
Community Life					
Volunteer Work (1991)					Independent Sector survey, 1992.
Doing Volunteer Work	22.1%	44.7%	66.1%	76.6%	
Average Hours Volunteered per Week	5.1 hrs	4.1 hrs	3.5 hrs	4.6 hrs	
Volunteer Work (1989) (% Distribution)	8.3%	18.8%	28.1%	38.4%	Bureau of Labor Statistics. *News*, USDL-90-154.
Churches, Other Religious Organizations	48.4%	41.5%	36.8%	32.9%	
Schools, Educational Organizations	6.6%	12.5%	14.7%	17.4%	
Civic, Political Organizations	10.0%	11.2%	13.3%	16.4%	
Hospitals, Health Organizations	10.0%	11.1%	10.8%	9.7%	
Social, Welfare Organizations	13.1%	8.8%	10.1%	10.1%	
Sport, Recreational Organizations	4.8%	8.2%	8.0%	7.8%	
Other Organizations	7.0%	6.7%	6.3%	5.7%	
Registered to Vote (1992)					Bureau of the Census. *Current Population Reports*, P-20-466.
Total	50.4%	64.9%	75.4%	84.8%	
Voted in Presidential Election (1992)					Bureau of the Census. *Current Population Reports*, P-20-466.
Total	41.2%	57.5%	68.7%	81.0%	
Political Party Identification (1992)					Center for Political Studies, University of Michigan.
Strong Democrat	35%	20%	14%		
Weak Democrat	16%	19%	17%		
Independent Democrat	14%	15%	14%		
Independent	11%	13%	11%		
Independent Republican	4%	12%	14%		
Weak Republican	9%	12%	17%		
Strong Republican	9%	9%	14%		
Apolitical	3%	2%	0%		
Influential Community Leadership (1992) (Percent Distribution)					The Roper Organization.
Influentials	5%	22%	29%	44%	
General Public	20%	37%	23%	19%	
Crime and Defense					
State Prison Inmates (1991) (Percent Distribution)	41.2%	58.8%			Bureau of Justice Statistics. *Profile of State Prison Inmates, 1991.*
Prisoners Under Sentence of Death (1992) (Percent Distribution)	46.5%	32.4%	9.0%		Bureau of Justice Statistics. *Capital Punishment.*

Expenditures for Education per Full-Time-Equivalent Student in Public Higher Education

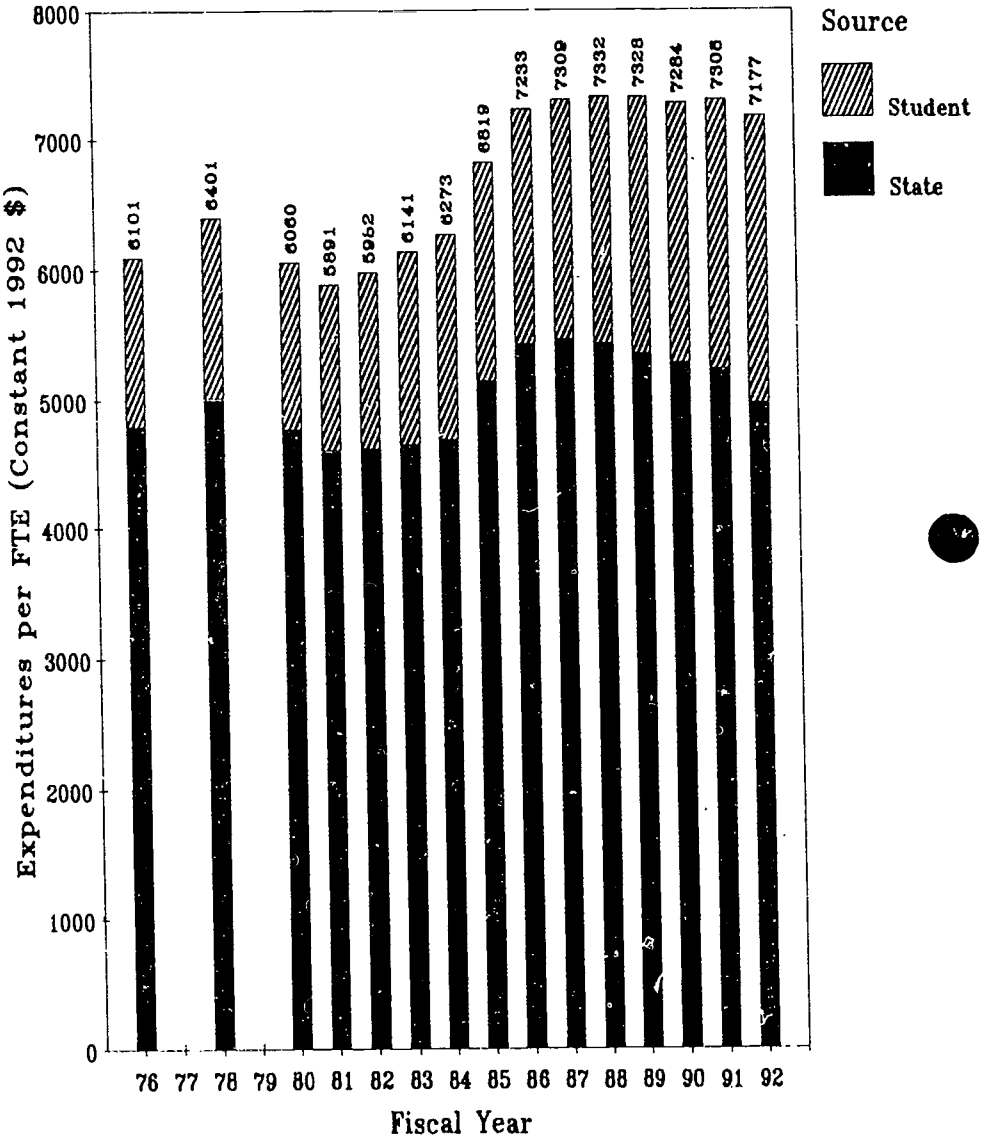
The funding agonies during the 1990s of public higher education have been reported in many places, especially by public institutions and their national organizations. These funding agonies are the direct result and consequence of substantial reductions in the shares of state budgets allocated to higher education. During the 1990s, this reduction in shares of state budgets has been worsened further by mid-year budget reductions.

Because serious budget reductions have obvious implications for educational opportunities for students through the capacity of public higher education institutions and the quality of the programs they are able to offer, we have examined enrollment and fiscal data reported to the National Center for Education Statistics *through the Integrated Postsecondary Education Data System (IPEDS) surveys.*

Our analyses suggest that not all is so bleak as may first appear. There is both good and bad news in the available enrollment and fiscal data. Among the highlights of this analysis are the following findings:

- Nationally, constant dollar funding from states and students rose from about $6000 per FTE students between FY1976 and FY1984 to about $7200 per FTE student between FY1986 through FY1992.
- Between FY1986 and FY1992, the expenditure per FTE student shifted sharply between the states.
- Between FY1980 and FY1992 the share of the total expenditures of public institution for student education increased from 21.4 to 30.9 percent of the total.
- During this same period, the share provided by states declined from 78.6 to 69.1 percent of the total.
- Within the total expenditure for student education in public institutions, the share devoted to udent financial aid, student vices, and academic support (including libraries) increased. The share devoted to instruction, institutional support and especially plant operations and maintenance has declined.

Expenditures for Education per FTE Student in Public Higher Education, FY1976 to FY1992



The Data

Our data for this analysis were taken from survey data collected from institutions and published by the National Center for Education Statistics in the current and prior editions of *The Digest of Education Statistics*.

Full-time-equivalent enrollment data as defined by NCES is full-time enrollment plus either the FTE equivalent of part-time enrollment if reported by the institutions or one-third of part-time enrollment if FTE is not reported by the institution.

Expenditure data are collected in the financial surveys by NCES. We have calculated expenditures for education as a subset of Educational and General Expenditures. Our definition includes all reported expenditures for instruction, student services, and student grants and scholarships, plus a portion of the expenditures reported for institutional support, academic support and plant operations and maintenance. This portion is the share of instruction, research and community service expenditures represented by instruction.

Constant dollar calculations are based on the Consumer Price Index for urban consumers.

National Expenditures

In FY1992, public institutions spent $56.436 billion on education for 7,862,845 FTE students, or $7177 per FTE student. This was spent as follows:

Instruction	58.1%
Academic Support	9.0%
Student Services	8.3%
Institutional Support	10.4%
Plant Operations & Maint.	8.4%
Scholarships and Grants	5.8%

Public institutions collected $17.455 billion in tuition and fees from students, or $2220 per FTE. The balance of $4957 per FTE was provided from other sources, mainly state taxpayers.

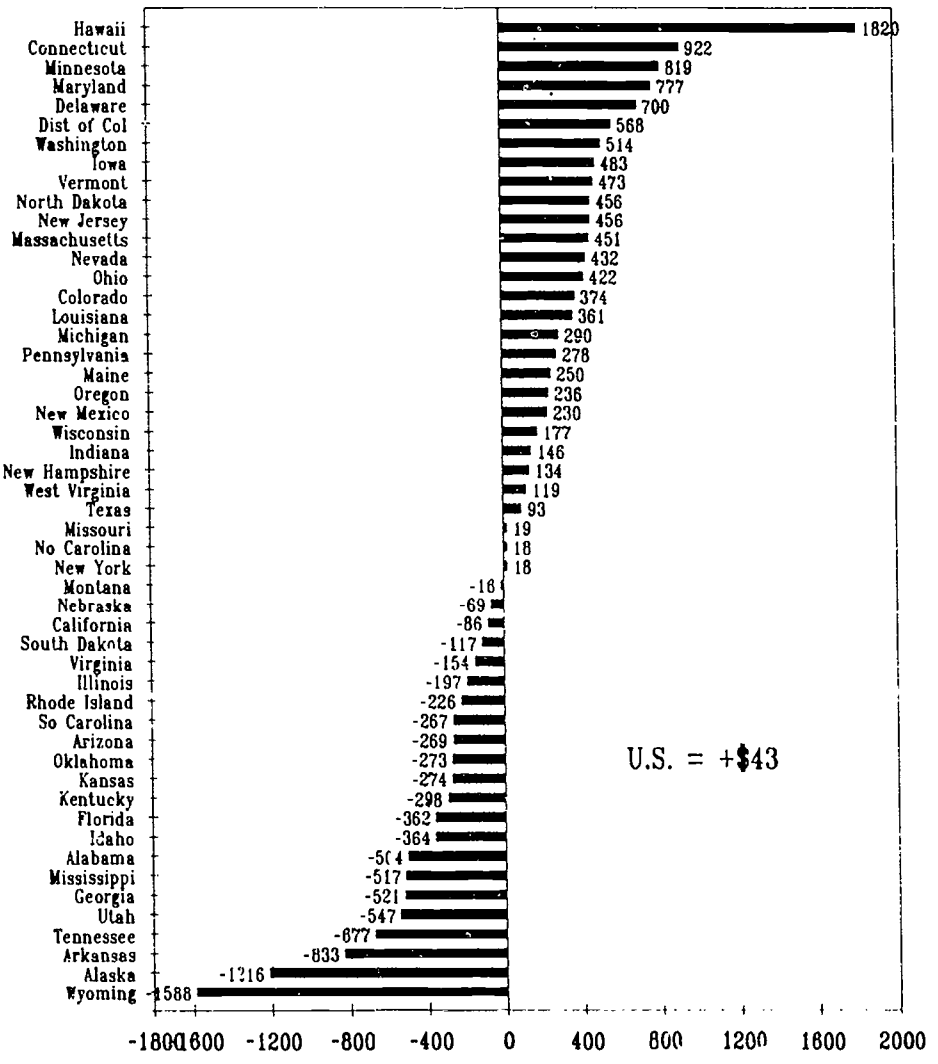
Between FY1976 and FY1992, and especially between FY1984 and FY1986, expenditures per FTE student rose in public higher education. From FY1976 through FY1984, constant 1992 dollar expenditures per FTE averaged about $6100, then jumped by 19% to nearly $7300 between FY1986 through FY1992.

The expenditure per FTE peak was reached in FY1988 at $7332. By FY1992 this had slipped to $7177, or about 98 percent of the FY1988 level. The portion provided by states peaked at $5453 in FY1987 and by FY1992 had dropped to $4959, or about 91 percent of the FY1987 state support level. The decline in state support of $494 between FY1987 and FY1992 was partly made up with increased tuition and fee revenues of $362 per FTE during the same period.

Changes in Instructional Expenditures

By far the largest component of educational expenditures for education in public institutions is instruction. As a proportion of the total, this share has

Change in Instructional Expenditure per FTE Student in Public Higher Education Between FY1986 and FY1992



declined slightly from 59.0 percent in FY1976, to 58.0 percent in FY1985, and stood at 58.1 percent in FY1992. (No other component of educational costs amounts to more than about 10 percent of educational expenditures.)

Comparisons of instructional expenditures are difficult at best, largely because of the variability of the meaning of full-time-equivalent student between states, between institutions, or even between programs within an institution. A freshman FTE, for example, is not comparable to a medical student FTE in budgets.

However, *changes* in expenditures per FTE do have some limited meaning. Here we examine changes in expenditures per FTE student within states between the fiscal years of 1986 and 1992. This is a period of relatively stable expenditures per FTE *in the aggregate.* In 1992 dollars, public institutions spent $4157 per FTE for instruction in FY1986 and $4200 in FY1992--up 1.0 percent.

However, very large changes in expenditures for instruction occurred within states between FY1986 and FY1992. Twenty nine states *increased* their expenditures per FTE for instruction. The largest increase occurred in **Hawaii**, which increased from $4641 to $6461, or by 39 percent. Expenditures for instruction also increased by more than $500 in **Connecticut, Minnesota, Maryland, Delaware, District of Columbia** and **Washington**. Large *decreases* in instructional expenditures occurred in **Wyoming, Alaska, Arkansas, Tennessee, Utah, Georgia, Mississippi** and **Alabama**.

Conclusions

On the whole, expenditures for student education in public colleges and universities appear to be quite close to record highs in FY1992. The most recent seven fiscal years of published data--1986 through 1992--compare favorably with data for the prior ten-year period.

This overall picture, however, obscures several problems in the financing of educational opportunity for students in public institutions. Among these are:

- Costs of higher education are being shifted to students largely without regard for the differing abilities of students to pay the larger share of the costs of their own educations. In constant dollars, between FY1980 and FY1992 tuition revenues per FTE increased by $921. Institutional financial aid per FTE increased by $155 during this period--17 percent of the increase.
- Overall stability obscures very large increases and decreases in expenditures for the core activity of student instruction among the states. Those states with large decreases appear to be curtailing the quality of higher educational experiences for their students.

Postsecondary Education
OPPORTUNITY

The Mortenson Research Letter on Public Policy Analysis of Opportunity for Postsecondary Education

Number 35 | Iowa City, Iowa | May 1995

It's All a Matter . . . . . . *of Degrees*

Educational Attainment

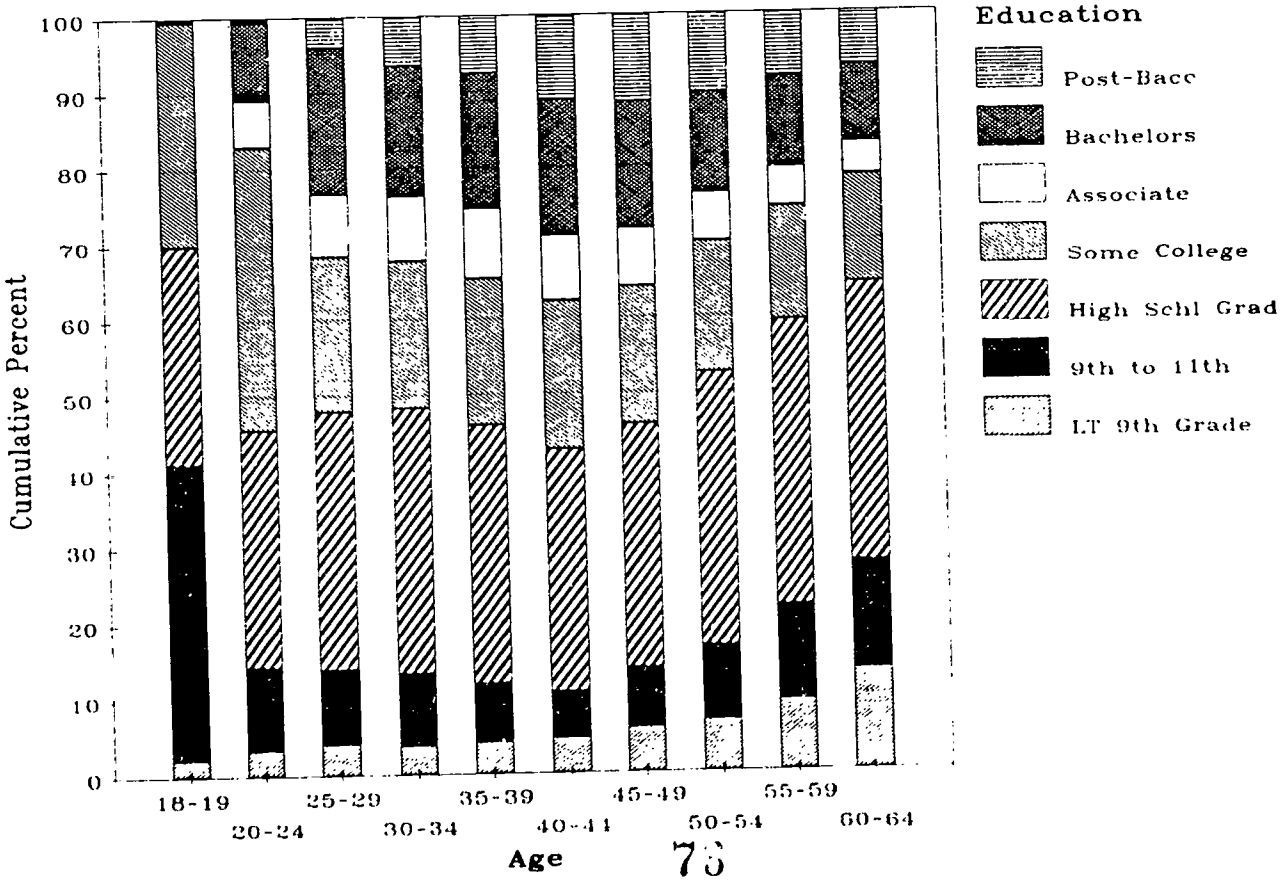
In an economy where standard of living is determined by income, and income is increasingly determined by educational attainment, who gets educated and who is left out becomes a life-or-death public policy decision. Congress is making those decisions today.

Congress is deciding not whether to expand federal investments in the future labor force, but instead how sharply to reduce those investments.

In making those decisions, Congress is deciding the fate of individuals who need financial aid to get the education that could equip them for more productive and better paid roles in the future work force. Congress is also deciding who among the needy will be denied the financial aid that will leave them without the education and training that would lead to jobs and incomes that support a decent standard of living. Congress is literally deciding who will have a life and who will not.

Congress is also deciding whether the United States will remain a land of opportunity for those with talent and motivation to succeed but limited financial resources, or become a land of institutionalized inequality where educational opportunity after high school will become reserved for those able to pay for it themselves without government aid. The United States has moved decisively in this direction

Educational Attainment of Americans by Age
1994



since the end of the 1970s. Across levels of family income, higher educational opportunity is more unequally distributed today than it has been at any time in the last twenty-five years.

Congress has designed the federal component of this social policy shift by shifting the costs of federal student financial aid to those least able to afford them. The steps have been:

- *Congress begins to shift the federal student financial aid emphasis from grants to loans.*
- *Origination and insurance fees increase the cost of loans to students.*
- *Interest rates on loans increased.*
- *Tax deductibility of interest on educational loans eliminated.*

Now Congress proposes to eliminate the in-school interest subsidy and add it to the loan principal for repayment to the lender.

Here we review data on educational attainment: who among the adult population of the United States has the education and training to compete for the better paying jobs available in the labor force. We find huge disparities in the distribution of educational attainment across different segments of the American population. These disparities translate directly and immediately into disparities in living standards, as measured by incomes.

Educational policy created to narrow discrepancies in educational attainment is under violent assault in Congress today. It is timely, therefore, that we review here the current distribution of postsecondary education and training in the adult population.

The Data

Our primary source for data is the as yet unpublished data collected by the Census Bureau in the March 1994 *Current Population Survey*. These data have been collected annually to describe in standard demographic measures of the population the amount of education attained.

The Current Population Survey is limited to the civilian, noninstitutional population.

The CPS data on educational attainment is now collected from the question: "What is the highest grade of school ... has completed, or the highest degree ... has received?" Prior to 1992, the CPS asked for information on the number of years of school completed--not degree received. Thus, there is a comparability issue between the 1992-1994 data and data reported for prior years.

Moreover, schooling data refers to progress in what the Census Bureau refers to as "regular" schools. These include graded public, private and parochial elementary and high school, colleges, universities, and professional schools. Both day and night schools are included. Generally "regular" schools refer to schools that offer a diploma or degree at the conclusion of a program of studies.

The standard demographic measures of the population reported by the Census Bureau include gender, race/ethnicity, age and other factors. The data on age refer to those 15 and older, and thus for our postsecondary analyses necessarily reflect education in progress. We rework the data on race/ethnicity to add important insights on educational attainment among largely distinct groups of the population: Anglos, Blacks, Asians (mainly) and Hispanics.

Attainment in the Population

In March of 1994 there were 200.77 million Americans ages 15 and over. Of this total, 76.3 percent were high school graduates and 19.2 percent had a bachelor's degree or more from college. Among those 25 years and over, 0.9 percent were high school graduates and 22.2 percent had at least a bachelor's degree.

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Mission Statement

This research letter is founded on two fundamental beliefs. First, sound public social policy requires accurate, current, independent, and focused information on the human condition. Second, education is essential to the development of human potential and resources for both private and public benefit. Therefore, the purpose of this research letter is to inform those who formulate, fund, and administer public policy and programs about the condition of and influences that affect postsecondary education opportunity for *all* Americans.

By age group, the proportion of the population with a high school diploma is highest among those 40 to 44 years old at 89.3 percent. Similarly, the proportion of the population with at least a bachelor's degree is highest in this age cohort at 29.0 percent. This peak appears to occur fairly late because so many people continue and complete their studies when in their 30s.

Whites and Blacks

Since 1940, the proportion of the population ages 25 to 29 years with four years or more of college (1940 to 1991) or with at least a baccalaureate degree (1992 to 1994) has increased. However, nearly all of this increase occurred between 1940 and about 1977, as shown in the chart to the right.

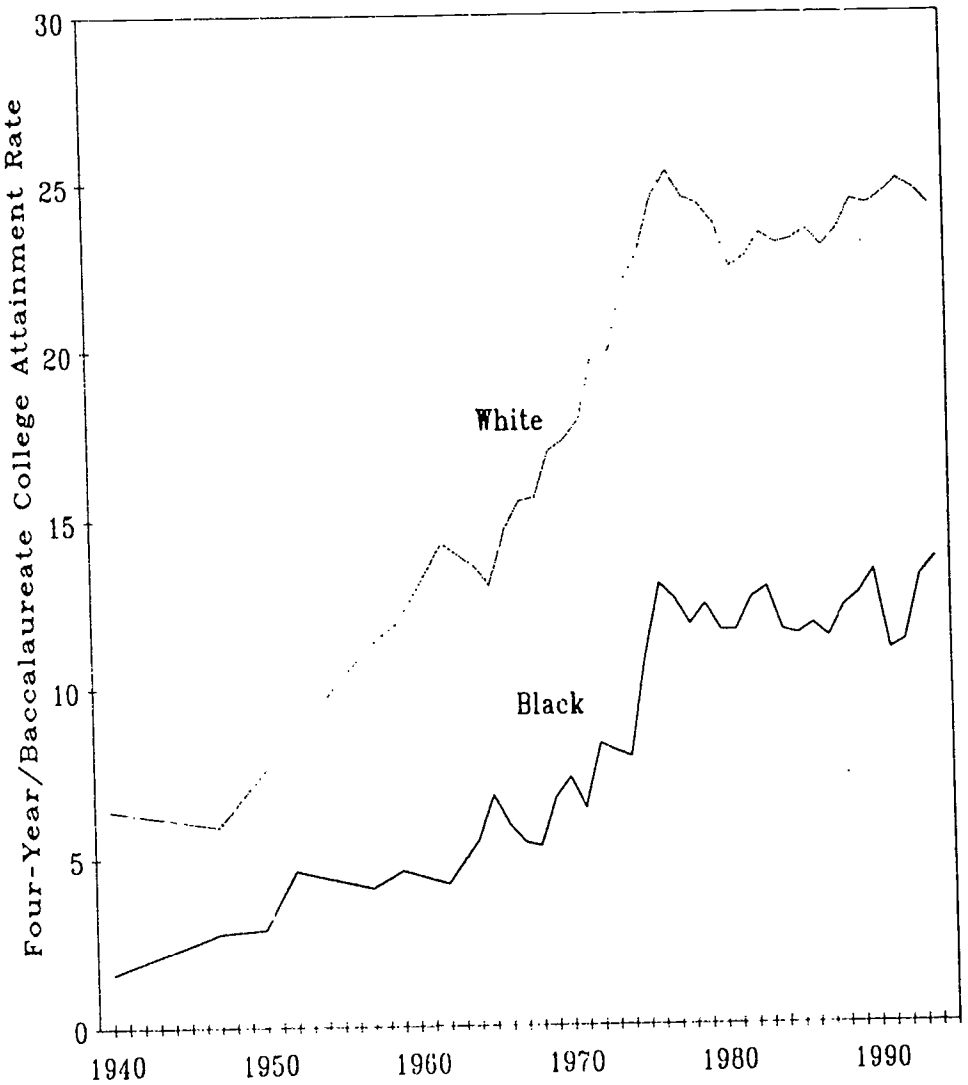
Among whites, the proportion of the population with a bachelor's degree increased from 6.4 percent in 1940 to a peak of 25 3 percent in 1977. Since 1977 the proportion of the population with a bachelor's degree has actually *declined* to 24.2 percent.

Among blacks, the proportion of 25 to 29 year olds with bachelor's degrees follows the same general pattern: increasing from 1.6 percent in 1940 to 13.0 percent in 1976, and remaining close to this level through 1994 when it reached a peak of 13.8 percent.

Note that the increase in educational attainment *among 25 to 29 year olds* peaked about 1976 or 1977. This population was just graduating from high school a decade earlier, about 1966 or 1977. There appear to be different explanations for whites and blacks.

For whites, the bulge in educational attainment around 1976 is clearly a product of the Vietnam War and the exemption from military service provided by college enrollment

Four-Year/Baccalaureate College Attainment Rates for Blacks and Whites 25 to 29 Years 1940 to 1994



through the early 1970s. The incentive to enter college was also an incentive to stay enrolled, and many males did so through graduation. If one were to "shave off" this anomaly (another federal policy decision), the rapid growth in white four-year college attainment that began about 1950 would probably have continued but at a slower rate after the mid 1970s. In this light the two-year downturn in 1993 and 1994 is noteworthy and clearly deserves close monitoring in the future.

Blacks, on the other hand, sustained nearly all of the sharp gains that peak about 1977. Blacks appear to be the beneficiaries of proactive civil rights and economic legislation passed by Congress in 1964 and 1965, sometimes known as the War on Poverty. Their gains ten years later in educational attainment among those 25 to 29 years old appear to be a direct product of federal social and economic

policies enacted into law during this enlightened era of federal policy making.

Race/Ethnicity and Gender

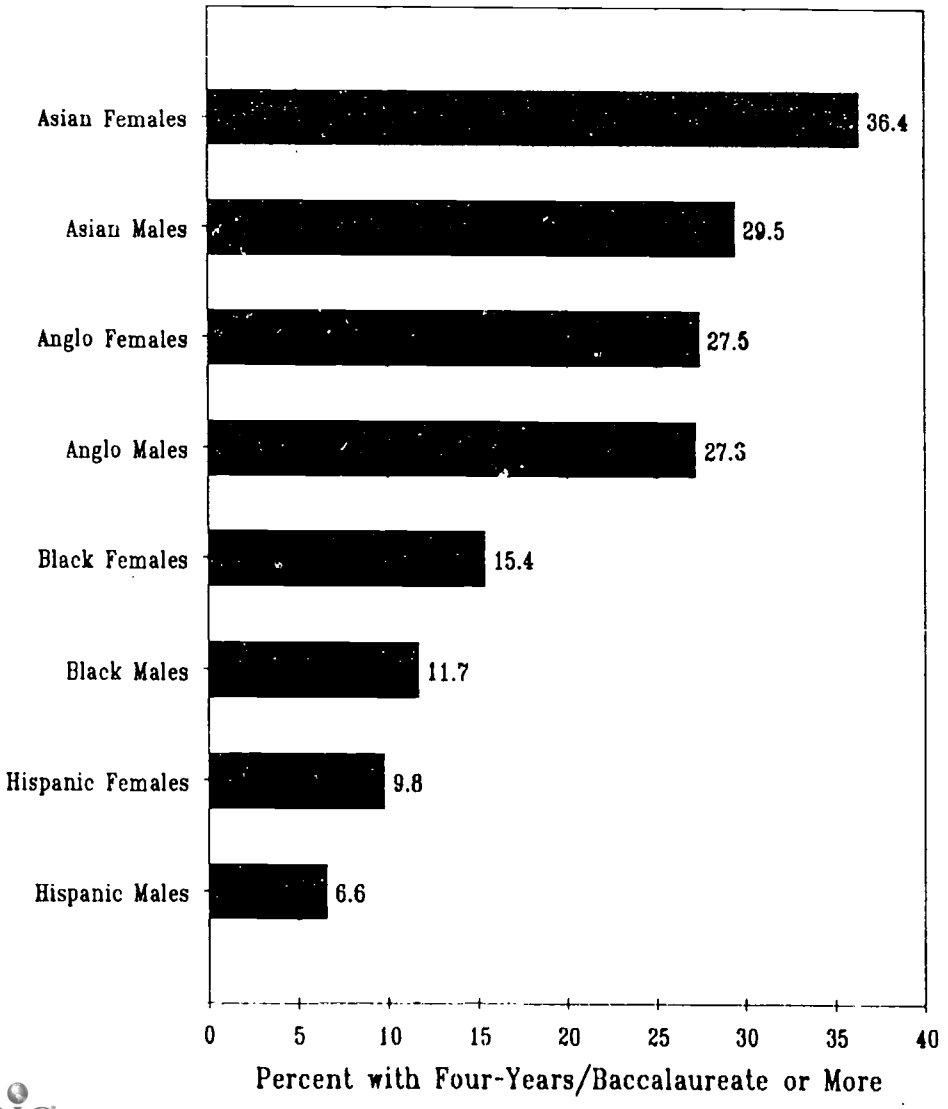
In March of 1994 the proportion of 25 to 29 year olds that had completed at least a bachelor's degree varied widely between genders and racial/ethnic groups.

Overall, 23.3 percent in this age range held a bachelor's degree. However, women were more likely than men to have the degree: 24.0 versus 22.5 percent. Those of other race--mainly Asians--were about four times more likely to have received a bachelor's degree than were Hispanics: 32.8 compared to 8.0 percent.

The chart below shows the very wide range in bachelor's degree attainment among different classifications of the population between 25 and 29 years. At the extremes, an Asian female is nearly six times more likely than a Hispanic male to have earned at least a bachelor's degree from college.

(A note on our racial/ethnic classifications: The Census Bureau publishes data on totals, whites, blacks and Hispanics. From these data we derived the four groups shown in the chart on the following page. Anglos are whites minus Hispanics. Asians are total minus whites and blacks. What we call Asian also includes American Indians.)

Four-Year/Baccalaureate College Attainment Rates by Race/Ethnicity and Gender for 25 to 29 Year Olds 1994



Comment on Gender Differences

In March of 1994 for each of the four population groups, females are more likely to have earned a bachelor's degree by age 24 than are males. This difference is very large among Asians, blacks and Hispanics, and smallest among Anglos.

This accomplishment reflects simply stunning gains by women in educational attainment, both compared to men and compared to where women were after World War II. In the early 1950s women were less than half as likely as men to hold a bachelor's degree by age 25 to 29. As recently as the early 1960s women were only about 55 percent as likely as men to have this degree. However, all this began to change about 1965, and by 1991 women in this age range surpassed men in bachelor's degree attainment.

Overall, however, there are two distinct eras evident in these data.

- During the first era, between 1950 and 1975, the proportion of the population ages 25 to 29 that held at least a bachelor's degree from college increased sharply.
- During the second period, from 1975 through 1994, there has been virtually no growth in attainment of baccalaureate degrees among 25 to 29 year olds.

Where More . . . *. . . Really Means More*

Income and Educational Attainment by Gender

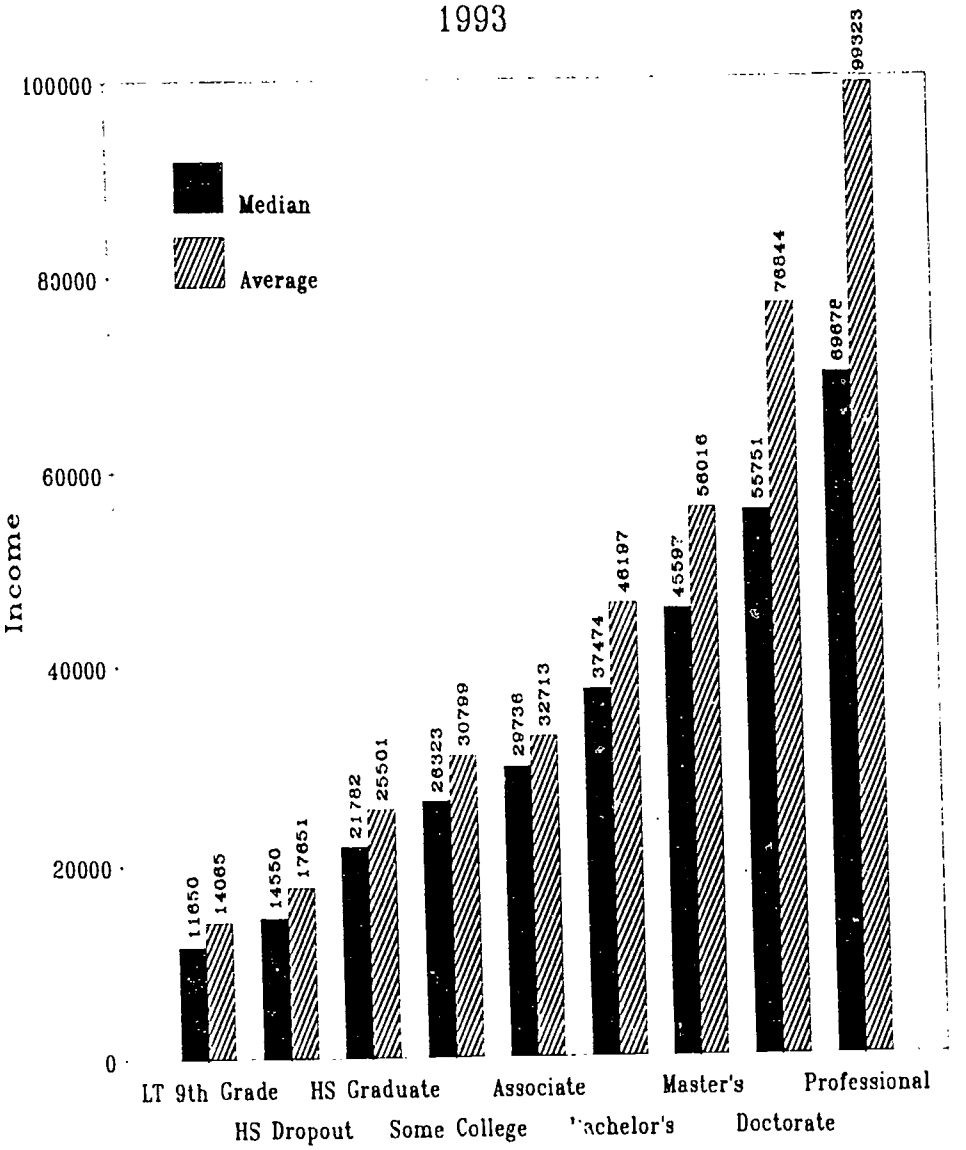
Since the early 1970s, private welfare as measured by income has been redistributed according to educational attainment. Those with the highest levels of educational attainment have seen their incomes rise faster than inflation, and hence experienced real gains in living standards. Others with the lowest levels of educational attainment have seen inflation increase faster than their incomes, and thus have experienced real declines in their living standards. Since the early 1970s postsecondary education has become the dividing line between workers who are succeeding and those who are failing in the labor force.

Therefore, public policy that fosters postsecondary educational opportunity broadens private and social welfare, and public policy that narrows opportunity for postsecondary education also narrows private and diminishes social welfare. (Congress: Are you listening?)

In this analysis we examine unpublished data on income by educational attainment for adults from the March 1994 *Current Population Survey* by the Census Bureau. These data are normally published in a standard table in the P20 report on educational attainment. However, extensive changes in Census Bureau publications may mean that these data may not be published in future years despite their vital insights into the key relationship between income and educational attainment that they provide. We mourn the loss.

Kominski, R., and Adams, A. *Educational Attainment in the United States: March 1993 and 1992.* Current Population Reports, P20-476. Washington, DC: Census Bureau.

Income by Educational Attainment for Males 25 Years and Over 1993



The Data

There are three key data elements in this analysis: income, educational attainment and gender:

- Income is income for the calendar year 1993 as collected in the Current Population Survey in March of 1994.
- Educational attainment is highest year of school completed, or highest diploma or college degree earned.

In addition, we display both mean/average and median income data for each level of educational attainment. In the past we have published only

median income data because we felt that median data more accurately described in a single number the income of a population than did means. Mean income data are prone to skewing by a small number of persons with very high incomes, and thus fewer people will fall above the mean and more people will fall below the mean.

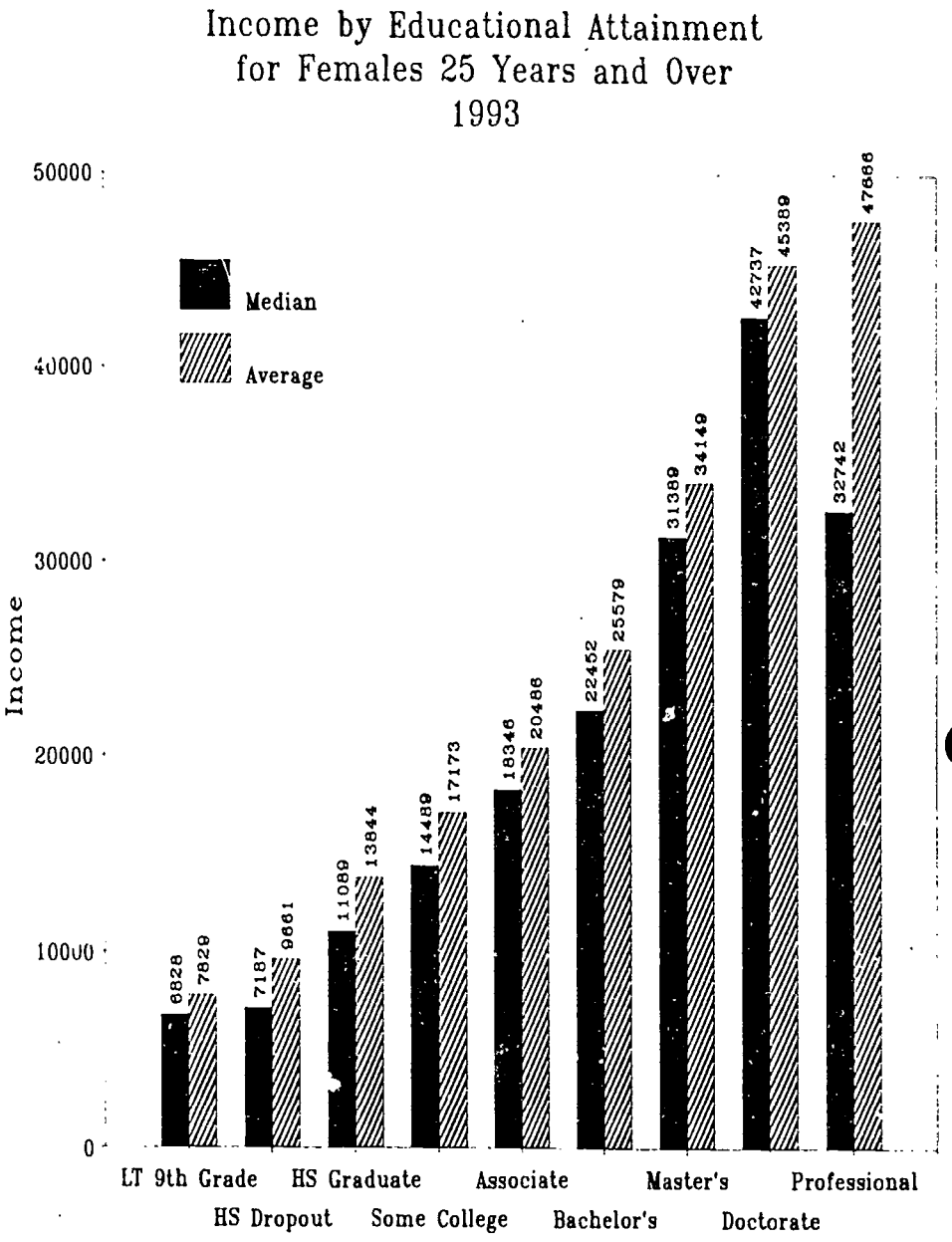
However, rather than make this call ourselves, we will report here both mean/averages and medians and leave it to the reader to determine which measure better describes income for their understanding and purposes.

In addition, we summarize working lifetime income profiles. While in summary measures incomes vary directly with educational attainment, we want to point out how these differences persist throughout 40 years of a worklife between 25 and 64 years.

Income by Gender

Income varies by educational attainment, it varies by age, and it varies by gender. Controlling for education and age, men with income outearn women with income by wide margins. Recognizing that this is a sore point with most women, we nevertheless present fully the data as compiled by the Census Bureau. We will discuss some important policy implications of this gender difference in the concluding section of this analysis.

Finally, our analysis of the relationship between income and educational attainment is limited to those with income. Among those 18 years and over, 94.6 percent had income in 1993. This ranged from 88 percent of those who had dropped out of high school, to 99 percent of those with master's degrees. Generally, the proportion of adults with income increased with educational attainment,



and more than 97 percent of those with a college degree (AA or higher) had income.

Males: Among males 25 and over, median income was $24,605, and average income was $32,496. About 60 percent of males with income also worked year-round and full-time. Among this subset, median income was $32,496 and mean income was $41,751.

Income among men varied both by level of educational attainment and age, as shown in the chart on page 5. Median income in 1993 for males with income ranged from $11,650 for those fifth to eighth grade educations, to $69,678 for those with professional degrees. Mean incomes were higher than median incomes, indicating that some individuals earned relatively very high incomes at each level of educational attainment.

For males that worked year-round and full-time, median annual incomes in

1993 ranged from $17,272 for those with fifth through eighth grade educations, to $80,549 for those with professional degrees. Again, means were well above medians.

Females: Among females 25 and over, median income was $12,234, and average income was $17,122. About 38 percent of females with income also worked year-round and full-time. Among this subset, median income was $23,629 and mean income was $27,670.

Income among women varied both by level of educational attainment and age, as shown in the chart on page 6. Median income in 1993 for females with income ranged from $6828 for those fifth to eighth grade educations, to $42,737 for those with doctorate degrees. Mean incomes were higher than median incomes, indicating that some individuals earned relatively very high incomes at each level of educational attainment.

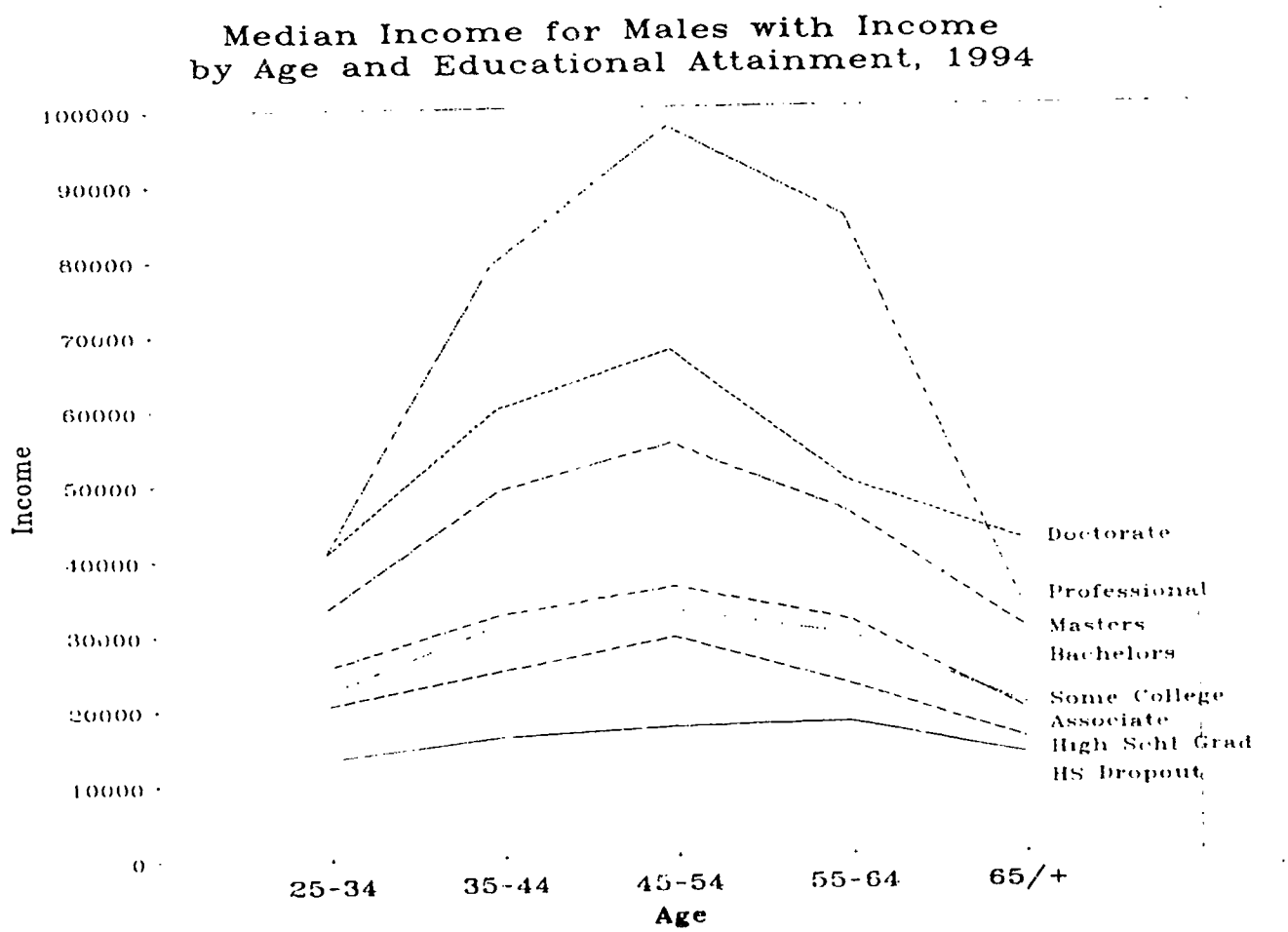
For females that worked year-round and full-time, median annual incomes in 1993 ranged from $12.812 for those with fifth through eighth grade educations, to $50,211 for those with professional degrees. Again, means were well above medians.

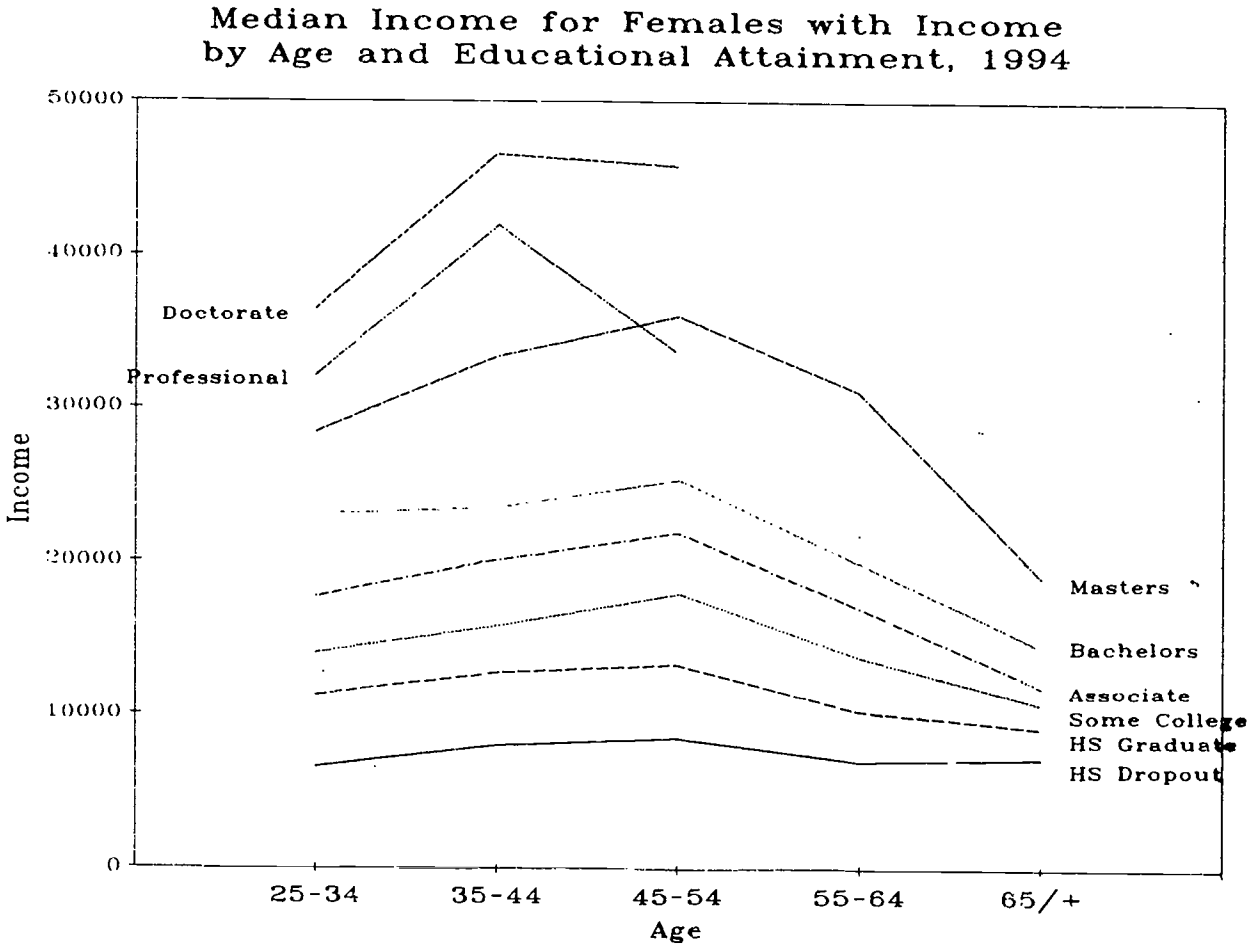
Worklife Income Profiles

In addition to the effect of gender and educational attainment on income, age also influences income. Typically, holding constant gender and educational attainment, income increases with age to a peak about age 50, and declines thereafter. As shown in the following charts, this pattern holds for both males and females at every level of educational attainment.

Males: Median income for males between 25 and 34 years with bachelor's degrees was $31,508, rose to $41,591 between the ages of 35 and 44, peaked at $46,766 at ages 45 to 54, then dropped off to $40,987 at age 55 to 64, and $26,721 for those 65 years and over.

The income advantage enjoyed by males with bachelor's degrees over those with high school diplomas begins at 54 percent at ages 25 to 34, rises to 67 percent between 35 and 44, dips to 61 percent between 45 and 54, rises to a peak of 81 percent between 55 and 64, then dips again to 76 percent for males 65 and over. Generally, the income advantage enjoyed by college educated males compared to those with high school diplomas increases--significantly--with age.





Females: Median income for females between 25 and 34 years with bachelor's degrees was $23,030, rose to $23,690 between the ages of 35 and 44, peaked at $25,520 at ages 45 to 54, then dropped off to $19,960 at age 55 to 64, and $14,754 for those 65 years and over.

The income advantage enjoyed by females with bachelor's degrees over those with high school diplomas begins at 105 percent at ages 25 to 34, dips to 87 percent between 35 and 44, rises to 92 percent between 45 and 54, rises again to 94 percent between 55 and 64, then dips again to 62 percent for females 65 and over.

Worklife Returns to College Investment

The incomes of workers with different levels of educational attainment can be multiplied out over a multi-year worklife to estimate their lifetime earnings. These data can then be used to estimate the lifetime income advantage of different levels of college educations compared to a high school education.

Our analysis is summarized in the following table for males and females of all races, and for males and females that are white, black and Hispanic. The key components of this table are: a) the numbers of years working after receiving their highest degree, and b) the average income in 1993 for those 25 years and over by level of educational attainment. From these data we calculate lifetime income, the income premium beyond that of high school graduates and the lifetime income gain per year of study after high school.

In addition to unpublished Census Bureau data from the March 1994 *Current Population Survey*, we have used data on years to complete degree from another Census Bureau report.

Kominski, R., and Sutterlin, R. December 1992. *What's it Worth? Educational Background and Economic Status: Spring 1990.* Current Population Reports, Household Income Studies, P70-32. Washington, DC: U.S. Department of Commerce.

Our analysis is straightforward in the following table: lifetime income equals working years times average annual income. Subsequent data in the table compare these lifetime incomes to high school graduates.

Estimated Lifetime Income by Educational Attainment, Gender and Race/Ethnicity, 1993

Educational Attainment	Working Years	Mean Annual Income	Lifetime Income	Premium Over High School Grad	Lifetime Income Gain Per Year of Study After HS
Male, All Races, 25 Years and Over					
Doctorate	33.93	$76,844	$2,607,000	$1,383,000	$98,000
Professional	37.06	99,323	3,681,000	2,457,000	336,000
Masters	36.51	56,016	2,045,000	821,000	71,000
Bachelors	41.77	46,197	1,930,000	706,000	113,000
Associate	44.00	32,713	1,439,000	215,000	48,000
Some College	46.00	30,799	1,417,000	193,000	96,000
High School Graduate	48.00	25,503	1,224,000	0	0
Not High School Grad	51.50	15,622	805,000	-419,000	-120,000
Female, All Races, 25 Years and Over					
Doctorate	31.05	$45,389	$1,409,000	$744,000	$44,000
Professional	37.68	47,666	1,796,000	1,131,000	110,000
Masters	35.05	34,149	1,197,000	532,000	41,000
Bachelors	41.81	25,579	1,069,000	404,000	65,000
Associate	44.00	20,486	901,000	236,000	59,000
Some College	46.00	17,173	790,000	125,000	62,500
High School Graduate	48.00	13,844	665,000	0	0
Not High School Grad	51.50	8775	453,000	-212,000	-59,000
White Males, 25 Years and Over					
Doctorate	32.85	$79,618	$2,615,000	$1,353,000	$89,000
Professional	36.75	100,818	3,705,000	2,443,000	217,000
Masters	35.35	57,513	2,033,000	771,000	61,000
Bachelors	41.82	47,361	1,981,000	719,000	116,000
Associate	44.00	33,529	1,475,000	213,000	53,000
Some College	46.00	31,831	1,464,000	202,000	101,000
High School Graduate	48.00	26,295	1,262,000	0	0
Not High School Grad	51.90	16,277	845,000	-417,000	-107,000
White Females, 25 Years and Over					
Doctorate	32.85	$45,610	$1,498,000	$829,000	$55,000
Professional	36.75	45,759	1,682,000	1,013,000	90,000
Masters	35.35	34,515	1,220,000	551,000	44,000
Bachelors	41.82	25,565	1,069,000	400,000	65,000
Associate	44.00	20,602	906,000	237,000	59,000
Some College	46.00	17,163	789,000	120,000	60,000
High School Graduate	48.00	13,933	669,000	0	0
Not High School Grad	51.60	8,980	463,000	-206,000	-57,000
Black Males, 25 Years and Over					
Masters	34.52	$43,135	$1,489,000	$543,000	$40,000
Bachelors	40.99	36,329	1,489,000	543,000	77,000
Associate	44.00	27,072	1,191,000	245,000	61,000
Some College	46.00	23,009	1,058,000	112,000	56,000
High School Graduate	48.00	19,717	946,000	0	0
Not High School Grad	51.50	12,468	643,000	-304,000	-87,000

Estimated Lifetime Income by Educational Attainment, Gender and Race/Ethnicity, 1993

Educational Attainment	Working Years	Mean Annual Income	Lifetime Income	Premium Over High School Grad	Lifetime Income Gain Per Year of Study After HS
Black Females, 25 Years and Over					
Masters	34.52	$33,441	$1,154,000	$526,000	$39,000
Bachelors	40.99	27,335	1,120,000	492,000	69,000
Associate	44.00	19,644	864,000	236,000	59,000
Some College	46.00	17,181	790,000	162,000	81,000
High School Graduate	48.00	13,089	628,000	0	0
Not High School	51.00	7,853	401,000	-227,000	-76,000
Hispanic Males, 25 years and Over					
Masters	35.05	$42,857	$1,502,000	$616,000	$48,000
Bachelors	41.81	38,786	1,622,000	736,000	119,000
Associate	44.00	25,567	1,125,000	239,000	60,000
Some College	46.00	22,141	1,018,000	132,000	66,000
High School Graduate	48.00	18,467	886,000	0	0
Not High School	53.50	13,197	706,000	-180,000	-33,000
Hispanic Females, 25 Years and Over					
Masters	35.05	$30,751	$1,078,000	$292,000	$23,000
Bachelors	41.81	21,389	894,000	108,000	17,000
Associate	44.00	17,917	788,000	2000	0
Some College	46.00	16,400	754,000	-32,000	-16,000
High School Graduate	48.00	16,380	786,000	0	0
Not High School	52.40	7946	416,000	-370,000	-84,000

Findings and Conclusions

These data show powerful and consistent relationships between income and educational attainment.

- For both genders and each racial/ethnic group, income increases with higher levels of educational attainment.
- These differences persist across all age levels from 25 years onward.
- At any level of educational attainment, males with income earn more than females with income. This holds for whites, blacks and Hispanics.

Our analysis of incomes by educational attainment uses the incomes of high school graduates as a reference point to set up comparisons of the lifetime income gains from higher education to the costs of acquiring that higher education. While we do not make these comparisons here--annual costs of higher education have been addressed frequently in past issues of **OPPORTUNITY**--the reader is invited to do so.

For males of all races, a baccalaureate degree adds an average of $706,000 to his lifetime income over that of a high school graduate. For white males this premium is $719,000, while for black males it is $543,000 and for Hispanic males it is $736,000. Using the Census Bureau's data on average number of years following high school to complete a bachelor's degree, each year of higher education spent attaining a bachelor's degree after hign school adds $113,000 to lifetime income for all males, $116,000 for white males, $77,000 for black males, and $119,000 for Hispanic males. These are the lifetime income gains to be compared to annual costs of college attendance. They are clearly substantial.

For females of all races, a baccalaureate degree adds an average of $404,000 to her lifetime income over that of a high school graduate. For white females this premium is $400,000, for blacks it is $492,000, and for Hispanics it is $108,000. Each year of higher education following high school spent attaining the bachelor's degree adds $65,000 to lifetime income for all females. The comparable numbers are $65,000 for white females, $69,000 for black females and $17,000 for Hispanic females. Again, these are the lifetime income gains to be compared to annual costs of college attendance, and except for Hispanic women these gains are clearly substantial.

These findings highlight the different returns college graduates can expect from a higher education investment decision. Although all students face nearly identical attendance costs at any given higher educational institution, the income premium each can expect to receive in the labor force after graduation varies by gender and race/ethnicity. These differences are uniformly ignored in federal and state policy making.

Public Institution Tuition and Fees Up Sharply Again in FY1995

National average tuition and fee charges to resident undergraduate students in public flagship universities increased from $2837 to $3032, or by $195, in 1994-95 over a year earlier. The largest increase was in Alaska where the increase was $876. Other states with large dollar increases included Connecticut (+$422), Oklahoma (+$378) and Washington (+$375).

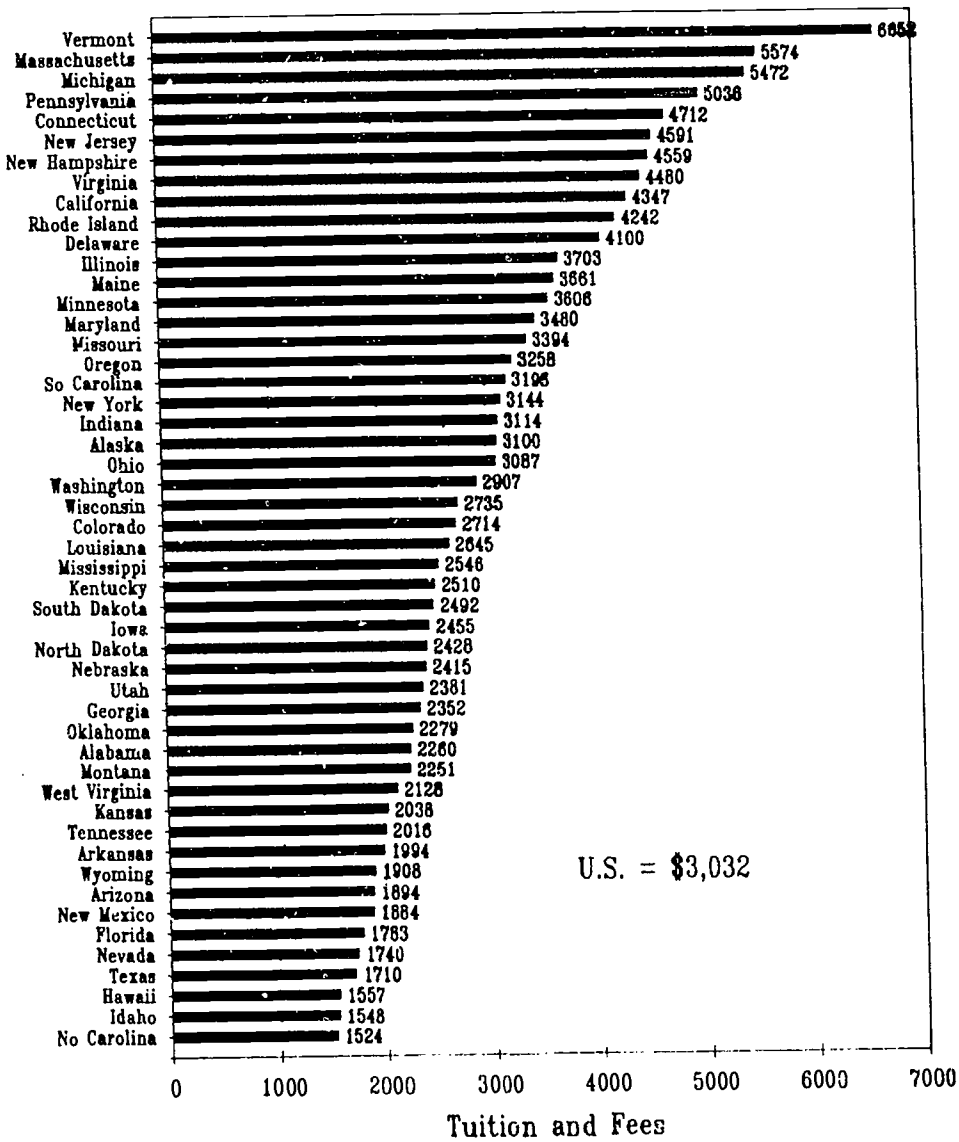
Resident undergraduate tuition and fees in public universities increased by 6.9 percent for FY1995 compared to a year earlier. The increase was 5.5 percent in state colleges and regional universities, and 6.8 percent in community colleges.

While some sources have reported these tuition and fee increases as moderating, we do not see it this way. This was the fourteenth consecutive year when public university tuition increases exceeded the increase in the Consumer Price Index which measures general costs of living. Since 1980, the average annual percentage increases in state flagship university tuition and fees have exceeded the increase in the Consumer Price Index by an average of 4.9 percent per year. The FY1995 increase in tuition and fees (+6.9%) exceeds the increase in the CPI-U (+2.6%) by 4.3 percent and about the same as the average for the previous 13 fiscal years.

Moreover and more ominously, median family incomes have increased by 6.9 percent less than the rate of inflation since 1989. Thus, since 1989 alone, while constant dollar family incomes have *decreased* by 6.9 percent, public flagship university constant dollar tuition and fees have *increased* by 27.6 percent. No wonder students have grown more anxious about college affordability between 1989 and 1994 (as described in last month's OPPORTUNITY).

Here we examine the most immediate consequence of the cost shift from taxpayers to students that is occurring in every state in the United States. States are diverting budget resources previously allocated to higher education to other new state budget priorities, usually corrections and Medicaid. As states reduce the shares

State Flagship University Undergraduate Tuition and Fees, FY1995



of state budgets committed to higher education, public institutions have raised tuition and fees charged to students (and their parents) to offset the loss of state funding. The secondary consequence is deteriorating college affordability for a growing share of the student population.

The Data

Our analysis is based largely on the annual surveys of tuition and fee charges in public colleges and universities conducted by the State of Washington Higher Education Coordinating Board. This year's survey was conducted by Patty Mosqueda of the Board staff.

Washington State Higher Education Coordinating Board. March 1995. *1994-95 Tuition and Fees Rates, A National Comparison.* Olympia, Washington.

The survey collects tuition and fee data from each state for three types of public institutions: universities, colleges and universities, and community colleges. Tuition and fee data are collected for resident undergraduates, nonresident undergraduates, resident graduate students and nonresident graduate students. The results are published annually by the Board. They are also available for both the current year and for each year since 1972-73 on computer diskette by request from the State of Washington Higher Education Coordinating Board in Olympia.

While public institutions included in the Board's survey are identified in the report, we have added our own terminology of "flagship university" to distinguish the Board's terms "university" from "colleges and universities." Any readers wishing further clarification are invited to peruse the Board's classification of institutions in the published report.

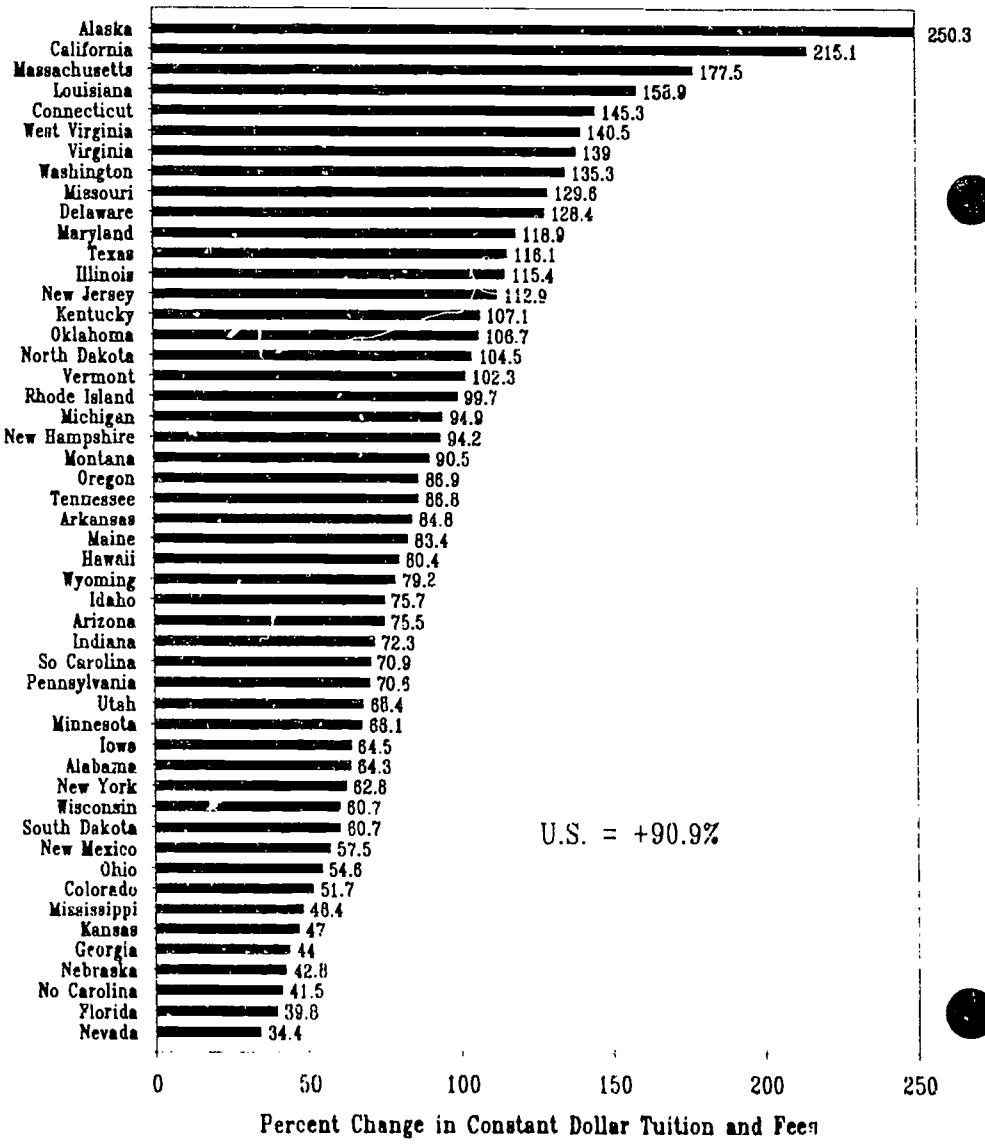
The control for inflation used in this analysis is CPI-U.

Tuition and Fees in Public Higher Education

For the 1994-95 academic year, resident undergraduate students are paying an average of $3032 for tuition and fees at state flagship universities. The range is from $1524 at the University of North Carolina at Chapel Hill, to $6652 at the University of Vermont in Burlington. The 1994-95 tuition and fee rate is up from $2837 last year and $2156 in 1990-91. The 1994-95 rate reflects an increase of 6.9 percent over the prior year.

Nonresident tuition and fees averaged $8464 at these universities in 1994-95, and ranged from $4557 at the

Change in State Flagship University Undergraduate Tuition and Fees, FY1981 to FY1995



University of Hawaii at Manoa to $16,470 at the University of Michigan at Ann Arbor. Tuition and fee charges to nonresident undergraduates averaged about 2.8 times those paid by residents in 1994-95, or the same as was the case in 1990-91.

At public regional universities and colleges, resident undergraduate students are paying an average of $2402 for tuition and fees in 1994-95. The range is from $1411 in North Carolina (average for Appalachian State, East Carolina, North Carolina Central, Western Carolina, and Winston Salem State Universities), to $3890 in Vermont (average of Castleton and Lyndon State Colleges). The increase for 1994-95 over 1993-94 was 5.5 percent. In 1990-91 tuition and fee charges averaged $1735 at these institutions.

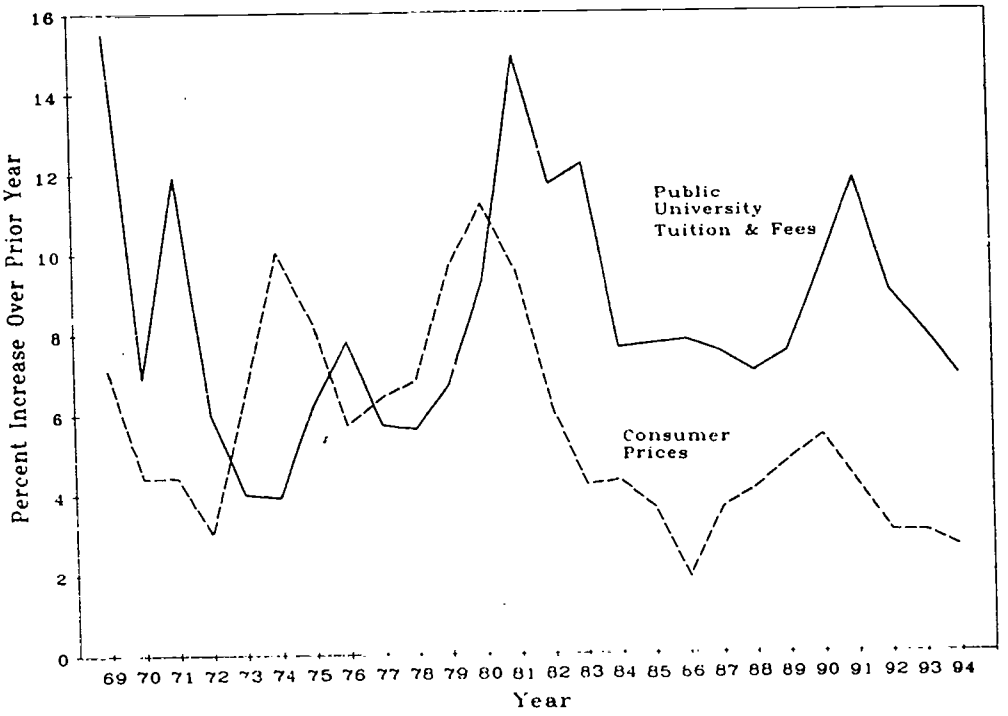
Estimated state average community college tuition and fee charges are $1314 for 1994-95. This ranges from $390 in California to an estimated $2457 in Massachusetts. Between 1993-94 and 1994-95, rates increased by 6.8 percent. In 1990-91 tuition and fee charges in community colleges averaged $947.

Changes in Tuition and Fees

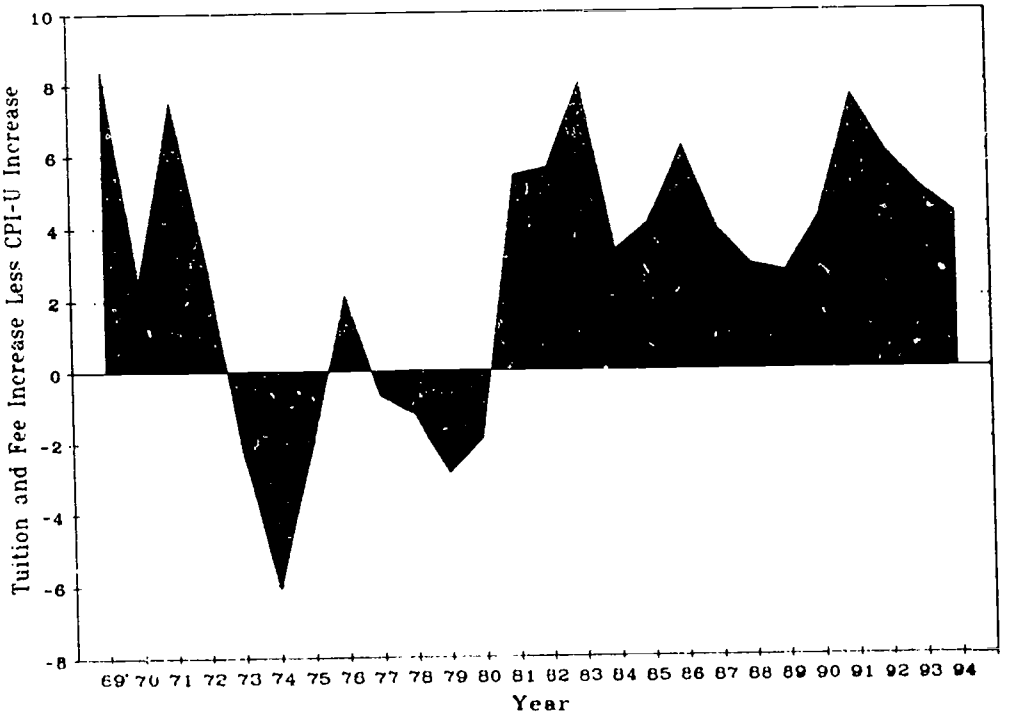
Every year tuitions and fees go up. But so do prices of other goods and services in the economy, and for that matter so do incomes appear to increase year after year. Because we are particularly interested in tuition and fees insofar as they affect affordability of higher education, we analyze here tuition and fee charges over time correcting for general economic inflation during the same period. We then measure this against family incomes over time.

The first chart on this page shows annual percentage changes in public flagship university tuition and fee charges to students for the years

Annual Percentage Increases in Public University Tuition and Consumer Prices 1969 to 1994



Difference Between Annual Percentage Increases in Public University Tuition and Consumer Prices 1969 to 1994



between 1969 and 1994. On the same chart we have also plotted annual percentage changes in the Consumer Price Index for urban consumers for the same period of time. This chart suggests the basic pattern of very roughly similar annual percentage changes in T&F and CPI up until 1980, and thereafter a divergence with T&F increases well above the CPI.

This disparity is shown more clearly on the area chart below the first chart. This area chart highlights the difference between annual T&F and CPI changes. Between the late 1960s and early 1970s, T&F changes (increases) were greater than the CPI changes (increases). Between 1973 and 1980 T&F increases were less than the CPI. Then from 1981 through 1994, T&F increases have averaged well above the annual increases in the CPI. Over this period annual increases in T&F have averaged 4.9 percent greater than annual increases in the CPI.

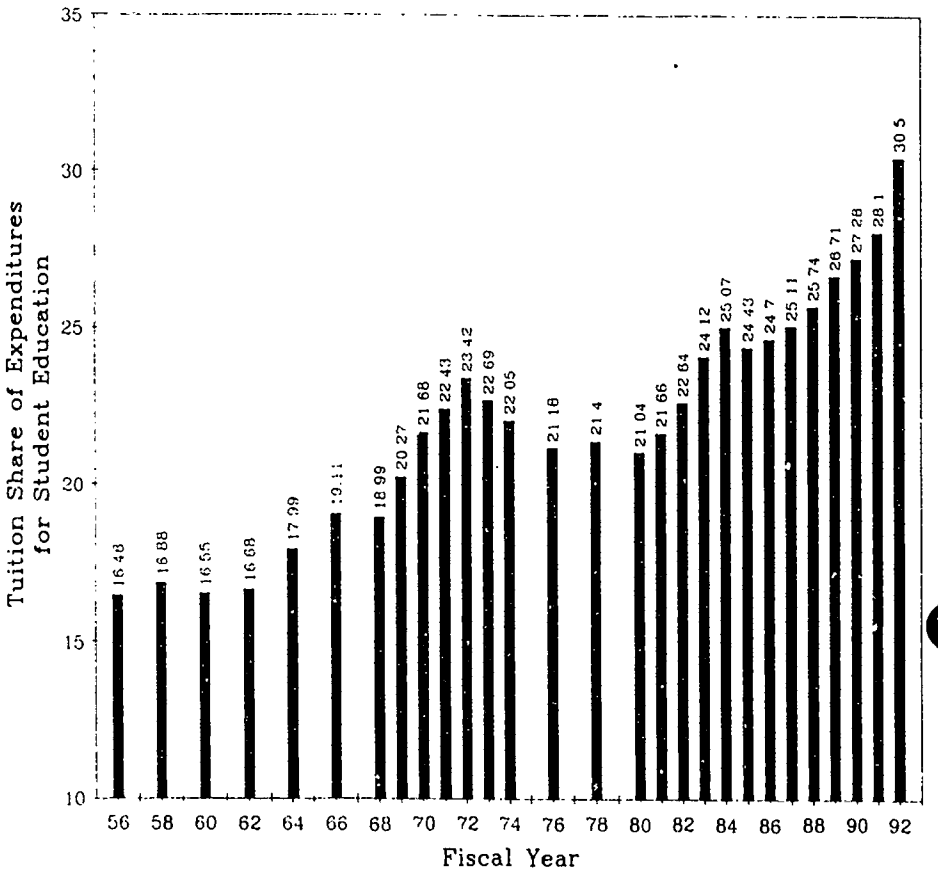
The real increases in state flagship university resident undergraduate tuition and fees between 1981 and 1994 by state are shown in the chart on page 12. Overall T&F increases in constant dollars averaged about 91 percent. In constant dollar terms; public university tuition and fees nearly doubled between 1981 and 1994. But the range was very wide, from a 34 percent increase in Nevada to 250 percent in Alaska.

Shifting Costs to Students

As state governors and legislators have chosen to shift state appropriations away from higher education into more "important" budget priorities like corrections and Medicaid, public institutions have raised tuition charges to students to offset the loss of state appropriations.

Our meta analysis of five national data sources published in the August 1994 issue of **OPPORTUNITY** summarized this cost shift. The *federal* government is now making about 72 percent of the peak financial effort it had made between 1978 and 1982. *State* governments are now making about 81 percent of their peak financial efforts reached variously between 1968 and 1982. *Students*, on the other hand are now making about 142 percent of the financial effort expected of them in 1980.

Tuition Share of Expenditures for Student Education in Public Higher Education Institutions Fiscal Years 1956 to 1992



Whither Next?

A person would have to be living incommunicado with the world to not understand the path of social policy that began about 1980 and marches on today through every statehouse, White House and Congress. *Costs of higher education will continue to shift from taxpayers to students.*

The major reasons for this are: a) the huge and growing private returns to postsecondary education that so clearly benefit individuals, and b) higher budget priorities assigned by governors and legislatures to rear-guard, defensive social policy priorities like locking up men who have done bad things and supporting women and children in broken families. The depth and breadth of social vision required for long-term human capital investments that supported higher education investments in the past has been replaced by a fanciful and dangerous notion that we are not a mutually dependent social and economic system.

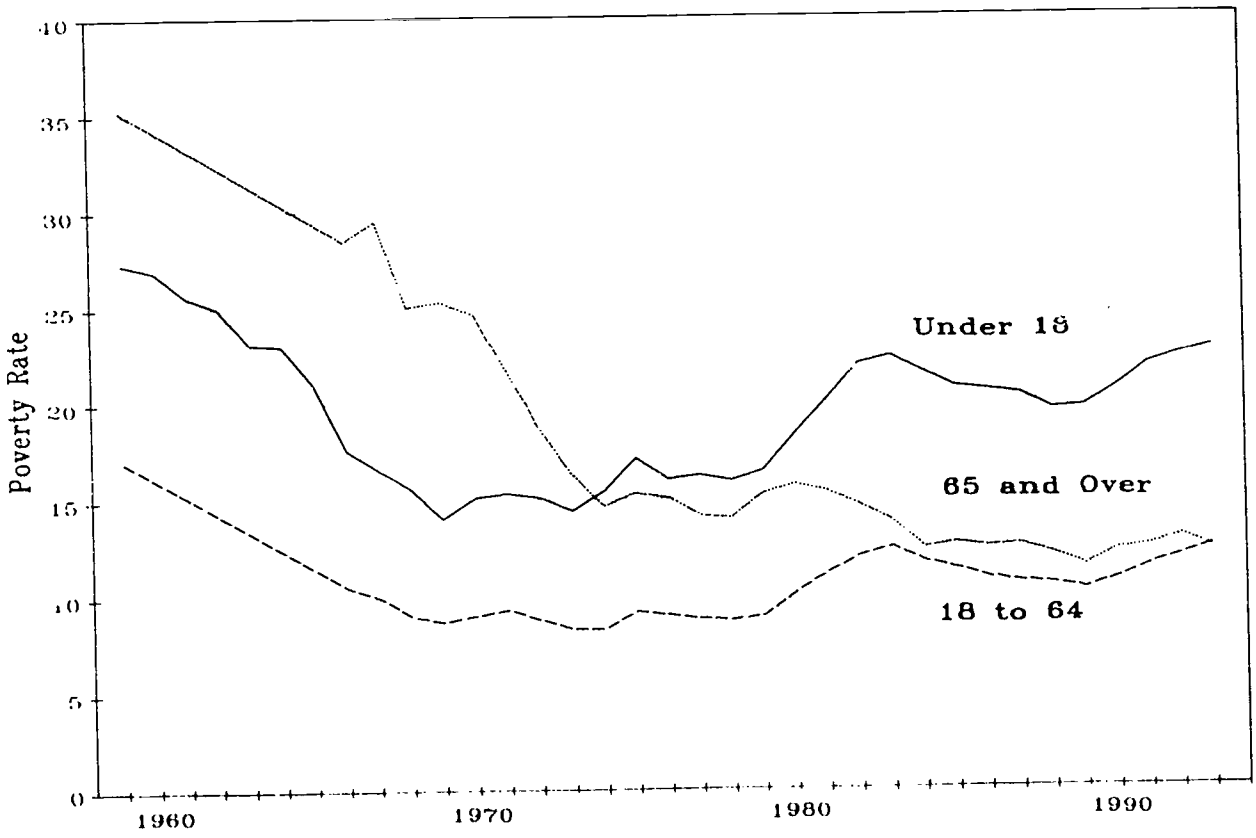
Think About This for a While . . .

The National Disgrace of Child Poverty

In 1993 the poverty rate among Americans less than 18 years of age stood at 22.7 percent. This was up from 22.3 percent in 1992, 21.8 percent in 1991, 20.6 percent in 1990 and 19.6 percent in 1989. The 1993 child poverty rate was the highest it has been since 1964 when it was 23.0 percent. The 1993 child poverty rate has increased substantially and quite steadily since its low point in 1969 when it was 14.0 percent. Compared to the child poverty rate in 1969, there were in 1993 more than 6,000,000 additional children living below the poverty line.

As the United Nation's Children's Fund reported in 1993, the child poverty rate in the United States--after tax and transfer adjustments--is more than twice that of any other western nation. Moreover, among the industrialized nations, only in the United States and the United Kingdom did the social health of children deteriorate between 1970 and 1989, and it worsened more in the United States than it did in the U.K.

Poverty Rates
for Children, Adults, and Elderly
1959 to 1993



Source: U.S. Bureau of the Census, Current Population Reports, Series P60-188, *Income, Poverty, and Valuation of Noncash Benefits: 1993*, U.S. Government Printing Office, Washington, DC, 1995.

End Notes . . .

▼ In its review of state legislative activities at midterm, *State Policy Reports* found that higher education policy was attracting even less attention than usual. That is not good news for educational opportunity. Changes in labor market demand for workers with higher levels of education and training are being ignored again, as they have for the last fifteen years.

State funding for higher education appears to be tight, and some legislators are trying to constrain tuition increases. Less money usually leads to raised admissions standards with their usual disproportionate impact on those from first generation, minority, low family income and other disadvantaged backgrounds. Those who are impacted least by these conditions are students from families with college educated parents, high family incomes, whites and Asians.

Public higher education's finance problems--now spanning several decades--are partly of its own making and partly external conditions over which high education has no control. An experienced political reporter and columnist in Iowa, David Yepsen, recently summarized the problems of the state's public universities with a laundry list of sore points:

- Conservative legislators--some older and some younger--who remember Vietnam War opposition, dislike the university's propensity to show pornographic movies in classrooms, and think of universities as dens of political correctness patrolled by academic thought police.
- Community colleges and private colleges and universities have grown more politically powerful, and prefer spending state money closer to home.
- Iowa university graduates tend to leave the state and live, work and pay taxes elsewhere after getting their state-subsidized educations in Iowa.
- Rural Iowans see the university geared toward meeting urban needs outside of Iowa. Long-standing perceptions about not training doctors for health care in small town but instead training specialists destined for big city practice reflect this concern. Farming problems also do not appear to be effectively addressed by the state's universities.
- Duplication through competing programs bothers Iowa legislators.
- Credibility problems linger between regents and legislators and regents and the governor's staff from past, expensive promises that were not kept, and from complex and confusing budget requests.

Iowa has treated its public universities generously in the past. The future, however, seems to indicate less state support, higher tuitions, declining quality, and higher admissions standards.

Postsecondary Education
OPPORTUNITY

The Mortenson Research Letter on Public Policy Analysis of Opportunity for Postsecondary Education

Number 36 | Iowa City, Iowa | June 1995

Public Policy . . . *. . . and Social Science*

Student Price Response Coefficients

In our very first economics course, we learned that if the price of a product or service increases, people will buy less of it. Some people will no longer be able to afford it, and other people will choose to spend their money differently. If the price of the product or service decreases, people will buy more of it. Some people will find it affordable, and other people will find the purchase attractive.

This fundamental principle from microeconomics is the foundation of federal and state government programs of financial aid for college students. These programs were created to make college more affordable by providing financial assistance for students from families without adequate income and savings to pay college attendance costs. By supplementing each needy family's contribution from its own resources, government financial aid programs enabled students who chose to continue their studies after high school to be able to pay college attendance costs partly or wholly with government grant, work-study and loan assistance.

For the last 15 years, the federal government has been backing away from the financial promises it made in law in the 1960s and 1970s to help students from needy families to pay for college. These commitments to reduce the costs of higher education for needy students were made in the Higher Education Act of 1965, the 1972 Education Amendments and the 1978 Middle Income Student Assistance Act.

During the last 15 years, the costs of federal student financial aid have been shifted from federal taxpayers to students and their families. This cost shift increases the cost of financial aid to students and thus reduces college affordability. The cost shift began with the shift in federal student financial aid emphasis from grants to loans beginning about 1977. During the subsequent loan era this shift continued by making education loans less expensive to the federal government and more expensive to students by increasing interest rates, adding fees and eliminating income tax deductibility on after-school loan repayment. This process continues in Congress today through the Congressional effort to shift the in-school interest subsidy cost from taxpayers to borrowers to be repaid along with principal after leaving college.

During this same period, all 50 states have also shifted costs of operating public colleges and universities from taxpayers to students by diverting state tax resources previously spent on higher education to other public budget priorities (usually corrections and Medicaid). In response, public colleges and universities have raised tuition and fee charges to students to offset this loss of state taxpayer support.

It is this cost shift from taxpayers to students that concerns us here. The cost shift not only contradicts the original purpose of government programs of student financial aid to make college more affordable, but it has unequal effects on students from different family income backgrounds. Ultimately, by diminishing educational opportunity today this cost shift will incur social costs in the future by decreasing incomes and taxes paid from those incomes and by increasing social program costs in such areas as corrections and welfare for those without postsecondary education or training. Even longer term social costs--decades into the future--are incurred when intergenerational consequences are included.

To a significant degree these enrollment consequences are predictable, first from economic theory as described above, and then from economic measurement of the effects of price on the college enrollment decisions of students within the context of that theory.

Higher education enrollment decisions are commonly categorized as access, choice and persistence. The economic measurement of effects of price changes on human behavior such as student enrollment decisions is called econometrics--economic measurement. What economic measurement of price effects on student enrollment decisions produces are called ***student price response coefficients***. This body of economic research guided federal policy makers in the design of federal student financial aid programs in the 1960s and 1970s. It can also be used to estimate the enrollment consequences that cost-shifting to students since 1980 has had on student enrollment decisions and student aid programs goals of equalizing higher education opportunity.

In this analysis we summarize the economic theory and research that enables us to describe the direction and approximate magnitude of the enrollment consequences of the cost shift that has occurred since 1980. Making postsecondary education more expensive to students predictably leads to smaller enrollments, whereas making that education less expensive predictably leads to larger enrollments. These effects carry over into choice and persistence decisions by students as well. In the current Congressional frenzy to reduce the federal budget deficit by reducing funding for social programs, social policy is being driven not by social policy research but by federal budget processes. We believe that this budget process should include consideration of the effects of higher education price increases on student enrollment decisions regarding access, choice and persistence in higher education. Specifically who is affected by cost-shifting, and by how much?

Economic Investment Theory

Student enrollment behavior in higher education is interpreted by economists as reflecting choices made by students regarding *benefits* and *costs* of alternative choices they face. The interpretation follows from private welfare maximization outlined by Adam Smith and other moral philosophers more than 200 years ago.

- The choices are whether or not to enroll in college, where to enroll, what to study and whether to continue to enroll through completion of a program of studies.
- The benefits of higher education include short-term consumption benefits and long-term investment returns.
- The costs of higher education include from the most obvious, those for which students are billed, to those that are less obvious such as lost income while enrolled in college and deferred costs through educational financing arrangements.

The investment theory of higher education enrollments expects that a student will make choices to maximize his or her private welfare. To maximize private welfare, the college student will make enrollment choices that maximize expected benefits compared to costs.

College students seek a variety of benefits from higher education (get a better job, learn more about things, make more money, gain general education, prepare for graduate/professional school, etc.). Moreover, each student gives his/her own weight to each of these motivating influences. Thus, individual students will respond differently to any given set of perceived benefits from higher education. Often the effect of these differences among students are

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Mission Statement

This research letter is founded on two fundamental beliefs. First, sound public social policy requires accurate, current, independent, and focused information on the human condition. Second, education is essential to the development of human potential and resources for both private and public benefit. Therefore, the purpose of this research letter is to inform those who formulate, fund, and administer public policy and programs about the condition of and influences that affect postsecondary education opportunity for *all* Americans.

reflected in the character of students enrolled on different college campuses, or even within a given campus. One sociological model of student cultures has four groups of students: academic, collegiate, nonconformist and vocational, according to their involvement with ideas and their identity with their institution.

The costs of college attendance include foregone income while enrolled in college, direct and indirect costs of attendance (tuition, fees, books, supplies, food, housing, transportation, personal and medical care, etc.), and, increasingly, financing costs of educational loans. In addition, cost-like features of the investment decision such as risk and knowledge-acquisition are a part of the student's choice decision.

The investment theory that combines these benefits and costs may be summarized as follows:

The student will choose to enroll in college and make subsequent enrollment choices if the net present value of the perceived benefits from the enrollment decision exceed the net present value of the alternative choices known to the student. The net present value of the perceived benefits is benefits less costs, with both future benefits and costs discounted to present value.

Economic Measurement

To be useful to public policy makers, the enrollment benefits to be expected from any particular set of public policy choices, decisions, funding levels and program design must be estimated. Toward this end economists have sought to measure the impact of alternative policy decisions on student enrollment decisions. Examples of policy choices that have been evaluated by economic measurement or econometrics include setting tuition rates to compare revenues gained to enrollments lost, measuring tuition effects in college choice decisions between institutions, measuring the enrollment effects of the Pell Grant Program, and to lesser degrees measuring the substitution effects of loans for grants on student enrollment behavior.

A unit of measurement of the effect of costs on student enrollment decisions is called the **Student Price Response Coefficient**, abbreviated here as SPRC. The SPRC is defined to be the percent change in enrollment rates of 18 to 24 year olds per $100 change in price (of tuition, fees, room and board) to the student. The dollar units are specific to purchasing power at a given point in time, and thus SPRCs estimated at any one point in time usually require inflation adjustments to current purchasing power conditions.

(Another unit of measurement of student response to price is price elasticity, defined as the percent change in enrollment divided by the percent change in price. SPRCs can generally be converted to or from price elasticities. This summary does not use price elasticities.)

SPRCs are estimated from natural studies of actual student enrollment decisions. Unlike physical science research, social science research usually does not conduct controlled studies of human behavior, e.g., giving student aid to one group of students but denying it to another control group, then comparing the enrollment behaviors of the two groups. Given this limitation, econometricians are left to explore data bases of enrollment behavior that has already occurred to sort out the distinct effects of price from all of the other influences on student enrollment decisions. These "after-the-fact" studies seek to isolate and measure price effects through sophisticated statistical techniques such as multiple regression. The results of these statistical analyses produce estimates of the effects of tuition rates, commuting distance, student financial aid in its several forms and other price effects in the context of the full range of influences on student enrollment decisions. Multivariate analysis is both statistically powerful and fraught with limitations that require well-trained practitioners to interpret properly. This is beyond the scope of this brief article. We will instead rely on a meta-analysis of many such natural studies of the effects of price on student enrollment behaviors prepared by Larry Leslie and Paul Brinkman.

Leslie, L. L., and Brinkman, P. T. *The Economic Value of Higher Education*. 1988. American Council on Education and MacMillan, New York.

Leslie, L. L., and Brinkman, P. T. "Student Price Response in Higher Education, The Student Demand Studies." *Journal of Higher Education*, March/April 1987.

OPPORTUNITY is especially grateful to Paul Brinkman of the University of Utah for his helpful comments on an earlier draft of this article.

Access

The 1987 meta-analysis of 25 empirical studies of the effect of price on college participation by Leslie and Brinkman consistently found that price affected enrollment, and in the expected directions. That is, higher prices decreased student participation and lower prices increased student participation in higher education. These studies included public and private institutions, 4-year and 2-year institutions, national, state, individual, district and institutional samples, and many other varieties of conditions and research designs.

When prices from the different studies were adjusted to 1982-83 dollars, the average SPRC was 0.7 percentage points and the mode was 0.6 percentage points. What this means is that

for every $100 increase in price charged students, the participation rate among 18 to 24 year olds in higher education would decline about three-quarters of a percentage point. These calculations apply to average weighted tuition and fees, and room and board rates from the early 1980s.

Because about a third of the 18 to 24 year old population was enrolled in college in 1982-83 (in October of 1993 34.0 percent were enrolled), each $100 *increase* in the price of higher education would result in a *decrease* of about 1.8 to 2.1 percent in higher education enrollments, all other things being equal. Similarly, each $100 *decrease* in the price of higher education would result in an *increase* of about 1.8 to 2.1 percent in higher education enrollments.

We emphasize two observations from the Leslie-Brinkman meta-analysis here. First, SPRCs are not the same across income levels. Students from low income family backgrounds are more responsive to price changes than are students from higher income family backgrounds. This has significance for need-based student financial aid programs that are targeted to low and middle income students. The Leslie-Brinkman meta-analysis of seven econometric studies found that between 20 and 40 percent of students from low income family backgrounds would dropout of college if grant aid were eliminated. The corresponding effects were about 13 percent for student from middle income families, and about 3 percent for students from high income families. Grant assistance had added an estimated 500,000 to 1,000,000 low income students to higher education by 1982-83, and an estimated 415,000 students from middle income families. These findings from econometric studies were supported by findings from student opinion surveys: about 1.3 million students reported that student aid had enabled them to enroll in higher education.

Second, these SPRC estimates are derived from studies that control for additional factors that influence student enrollment decisions, such as draft deferment for college enrollment during wartime conditions and changing labor market conditions. Thus, reported estimates are qualified by the "all other things being equal" caveat standard in econometric research. Over time the labor market for workers with different levels of educational attainment has not remained equal: the incomes of workers with less than postsecondary education have been in virtual economic free-fall for the last twenty years. Thus, while real costs of attending college have increased sharply since 1980, so too has the labor market relative premium for college education. We will return to this point shortly.

Choice

If price of attendance increases more at one institution than at another, enrollment shifts are likely to occur as investing students seek to maximize their private net return on their higher education investment by moving to the less costly alternative assuming all other things being equal. The meta-analysis by Leslie and Brinkman found that grant aid had a positive effect on choice for students from low income family backgrounds: with grants such as SEOG, state grants and institutional aid these students were more often able to choose more expensive institutions. Quantitative standardization was difficult to achieve in the meta-analysis, but results were in the predicted direction of effect. Students from low income family backgrounds increased their enrollment shares in high-cost institutions between the mid 1960s and the early 1970s, but little changed after that.

Persistence

Meta-analysis of 46 econometric studies of student persistence found that aided students were as likely as unaided students to persist in college. That is to say, student aid equalized educational opportunity regarding persistence once in college.

Several details of the meta-analysis add insight. First, persistence had improved in years closer to the early 1980s compared to prior years. Second, nonwhite aid recipients had a lower persistence rate than did white aid recipients. Third, persistence improved with larger aid amounts. Fourth, grant and scholarship aid improved student persistence more than did loans.

Conclusions

Student enrollment decisions of access, choice and persistence are influenced by price considerations. This finding is predicted by economic theory and confirmed by economic measurement. Higher prices reduce access, choice and persistence, and lower prices increase access, choice and persistence. Moreover, students from low family income backgrounds are most affected by price, students from high family income backgrounds are least affected, and students from families with middle-range income are somewhat affected. Student aid in the form of grants is more effective than are loans in influencing student enrollment decisions. Government subsidies targeted on needy students are about three times more cost-effective than is tuition policy in increasing student participation in higher education according to work by Jackson. And student aid influences enrollment decisions for older as well as younger students.

These conclusions were the basis of federal policy in the 1960s and 1970s to broaden opportunities for postsecondary education and training through needs-tested programs of financial aid for students. Their predicted effects have been confirmed in subsequent analyses of student enrollment behaviors.

Since about 1980, however, federal and state policies that had been designed to make college more affordable for students have reversed direction. Between 1952 and 1979, the share of direct costs of higher education borne by students declined and the share borne by taxpayers increased. Since 1980 public funds previously allocated to higher education have been diverted to other public budget priorities, and higher education has increased charges to students to offset the loss of taxpayer support.

As was reported in the February issue of **OPPORTUNITY** and using data from the National Income and Product Accounts, compared to the shares of financing responsibility borne by the respective parties in 1979, by 1993 students (and their families) were paying about $14.2 billion more for higher education and taxpayers were paying about $14.2 billion less. Of this total, federal taxpayers were paying about $4.5 billion less (through student aid retrenchment targeted on needy students), and state taxpayers were paying about $9.8 billion less (with higher tuition charges to students resulting).

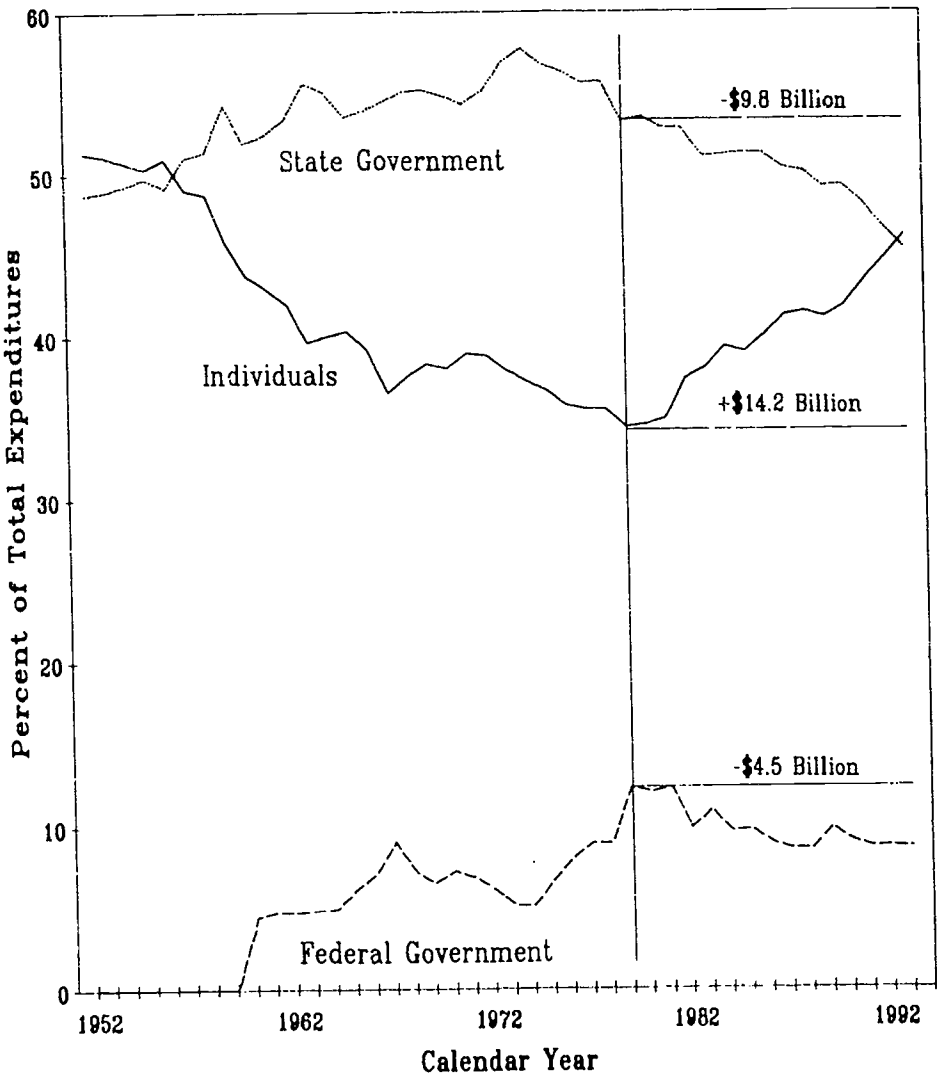
This cost shift to students should have lead to less higher educational opportunity if all other conditions did not change. But higher education enrollments have increased throughout the 1980s and 1990s, and the proportion of high school graduates enrolling in college immediately after high school has increased from 49.3 percent in 1979 to 62.6 percent by 1993.

So what explains this apparent contradiction? The answer is other conditions changed. Specifically, the labor market for workers with different levels of educational attainment has changed. During the last twenty years, the labor market premium for postsecondary educated workers has grown, and this premium has grown especially sharply in the 1980s and 1990s as the education and training requirements of the modern labor market have steadily grown. Thus, the labor market compels young people to get as much education as they can profit from. It draws all toward higher education.

Whether people are able to make favorable enrollment decisions is another matter. College attendance costs affect people differently. Some are able to absorb these costs themselves, while others require student financial aid to achieve access, choice and persistence. This is where cost-shifting frustrates educational decision-making for students and where, until about 1990, federal policy sought to alleviate cost barriers to postsecondary educational opportunity.

In perfectly predictable ways, to largely predictable degrees, the cost-

Shares of Responsibilities for Financing Higher Education and Change Between 1979 and 1993 1952 to 1993



shift from taxpayers to students has contradicted federal policy aims to equalize educational opportunity. Adding $14.2 billion to students' costs of higher education, and mainly to the costs faced by demonstrably financially needy students, has created greater inequality of educational opportunity in higher education than has existed at any time since 1970.

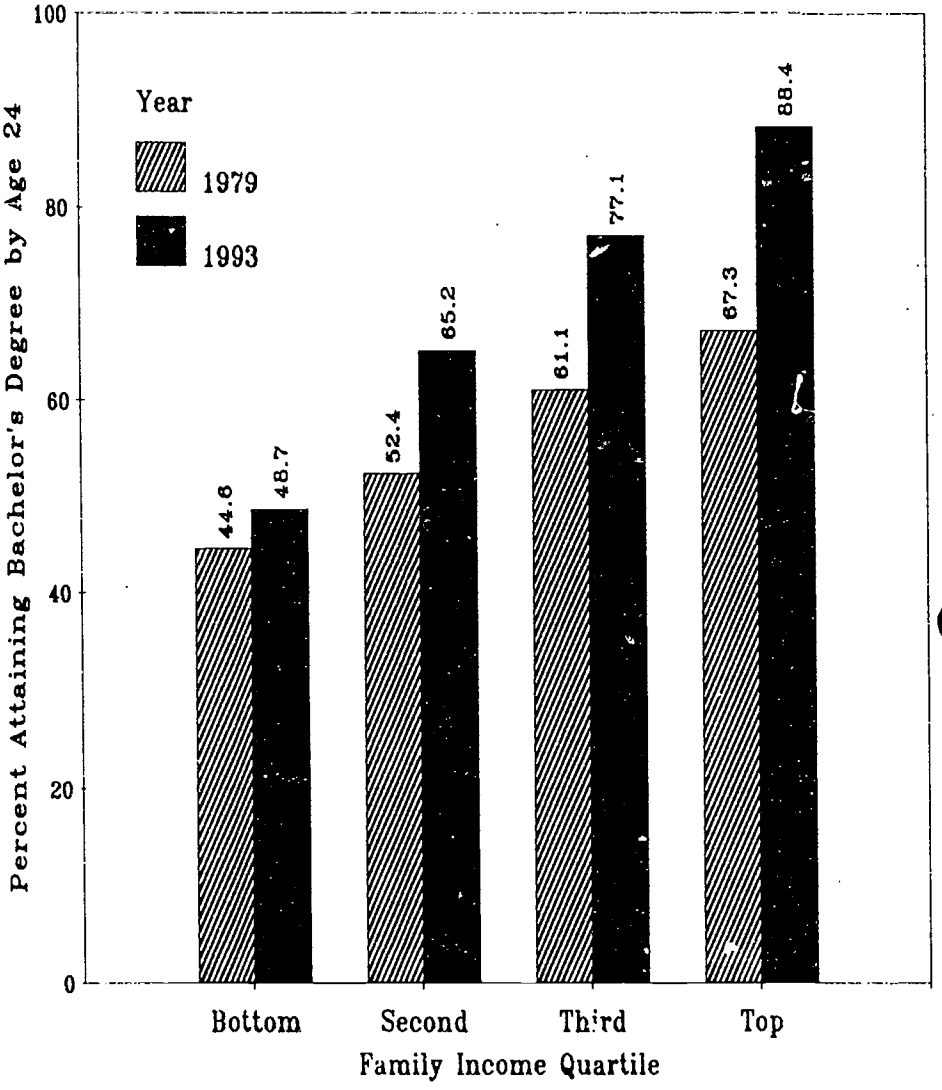
The chart on the right shows college participation rates for unmarried 18 to 24 year olds by quartiles of family income in 1979 and 1993. These data are reported annually by the Census Bureau from data collected each October in the *Current Population Survey*.

In both 1979 and 1993 college participation rates were lowest for those from the bottom quartile of family income, increased with family income and were highest for those from the top quartile of family income.

However, it is what happened between 1979 and 1993 that interests us here. It was during this period that $14.2 billion in the costs of higher education were shifted from taxpayers to students and that the labor market return on a college investment decision increased sharply. Let's see who responded to this increased college attendance incentive:

- *During this period, the college participation rate for those in the bottom quartile of family income (below $21,300) increased by 4.1 percent.*
- *For those in the second quartile of family income ($21,300 to $38,700), the college participation rate increased by 12.8 percent.*
- *For those in the third quartile of family income ($38,700 to $63,800), the CPR increased by 16.0 percent.*
- *For those in the top quartile of family income (over $63,800), the CPR increased by 21.1 percent between 1979 and 1993.*

College Participation Rates by Family Income Quartiles for Unmarried 18 to 24 Year Old High School Graduates 1979 and 1993



Thus, those least influenced by the costs of higher education, and those least affected by government pricing and student aid policies, were best able to respond to the increase in private returns to a higher education investment decision. The result is greater inequality in the distribution of higher educational participation across family income levels than has existed at any time since the Census Bureau began reporting these data in 1970.

What Congress had promised in successive authorizations of the Higher Education Act it has failed to support with program appropriations. The consequences were predictable and in fact have occurred. Those consequences may now be exacerbated through higher education student financial aid program funding reduction proposals currently under consideration in Congress.

But the Numbers . . . *. . . Are Up*

1994 High School Graduates Entered College At 1991-1993 Rates

The rate at which high school graduates have continued their educations in college in the fall following high school has remained essentially flat at about 62 percent for the four years between 1991 and 1994, according to data released earlier this month by the Bureau of Labor Statistics.

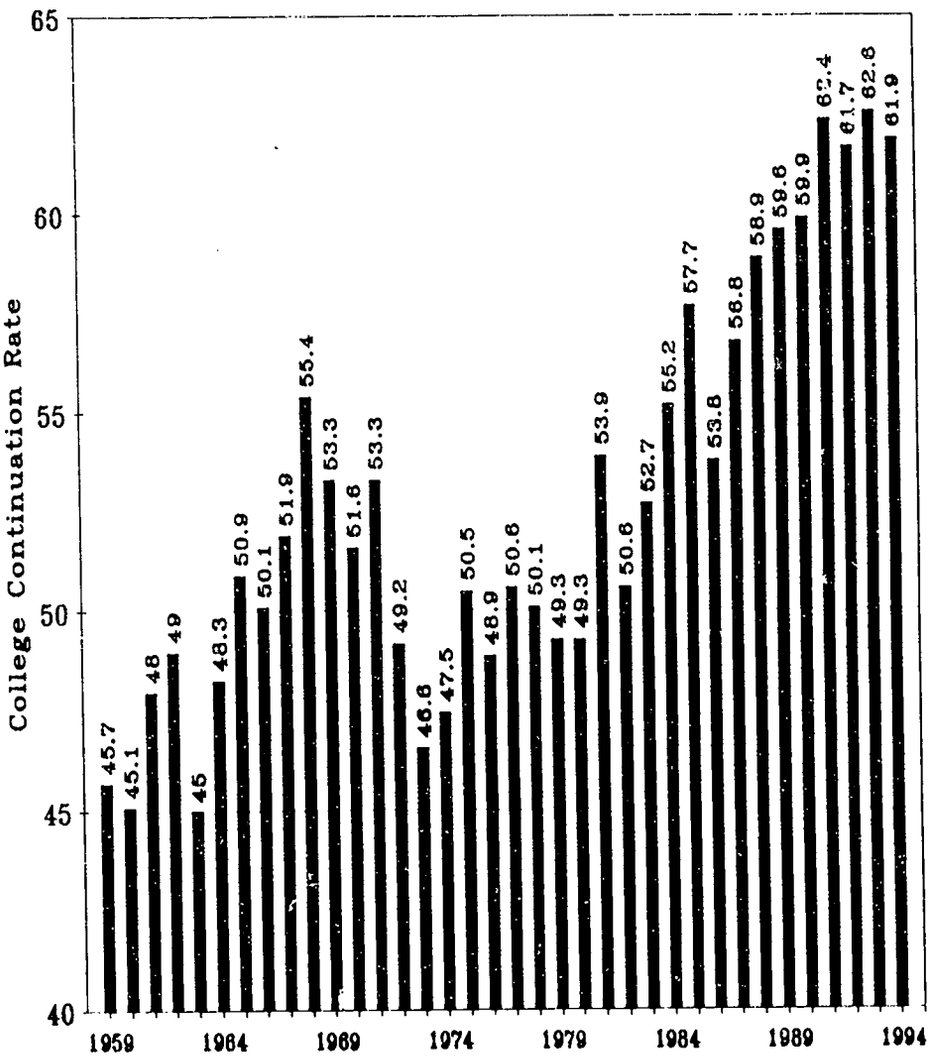
This leveling-off of the college continuation rate for recent high school graduates follows nearly two decades of steady and very substantial increases in the college continuation rate:

- *In 1973 46.6 percent of all high school graduates had enrolled in college the following fall.*
- *By 1991 62.4 percent were continuing their educations in college the following fall.*
- *During this period the average annual increase in the college continuation rate was 0.9 percent per year.*
- *Not since the late 1970s has the college continuation rate leveled-off over a four-year period.*

The Bureau of Labor Statistics data also indicate that the number of American high school graduates increased for the third straight year, following the bottoming out at 2.276 million in 1991. By 1994 the number of high school graduates was 2.517 million. These increases are the first sustained increases since the peak of 3.191 million reached in 1975.

As the college continuation rate as flattened, it is the increase in the number of high school graduates that is now producing increased numbers of college freshmen. This is the reverse of the source of college freshman enrollment growth that occurred between the mid 1970s and 1991.

College Continuation Rates
for Recent High School Graduates
1959 to 1994



These and many other important findings are derived from our analyses of the annual reports from the Bureau of Labor Statistics. Data are reported also by gender and race/ethnicity, and with one important exception--males--these data all portray the leveling-off phenomenon.

"College Enrollment and Work Activity of 1994 High School Graduates." *News, United States Department of Labor*, USDL 95-190.

The Data

The Bureau of Labor Statistics collects enrollment and employment data on recent high school graduates in the October *Current Population Survey*. The *Survey* is administered monthly by the Census Bureau to a nationwide sample of about 60,000 households. This particular portion of the *Survey* was begun in 1959, with gender and racial/ethnic detail added in 1960 and further racial/ethnic disaggregation added in 1976.

The purpose for this survey is to follow-up recent high school graduates to determine their educational and labor force status in the fall following high school. Currently, collegiate enrollment information is collected and reported on 2-year/4-year colleges, full-time/part-time status, gender, race/ethnicity and labor force status (employed, unemployed and not in labor force).

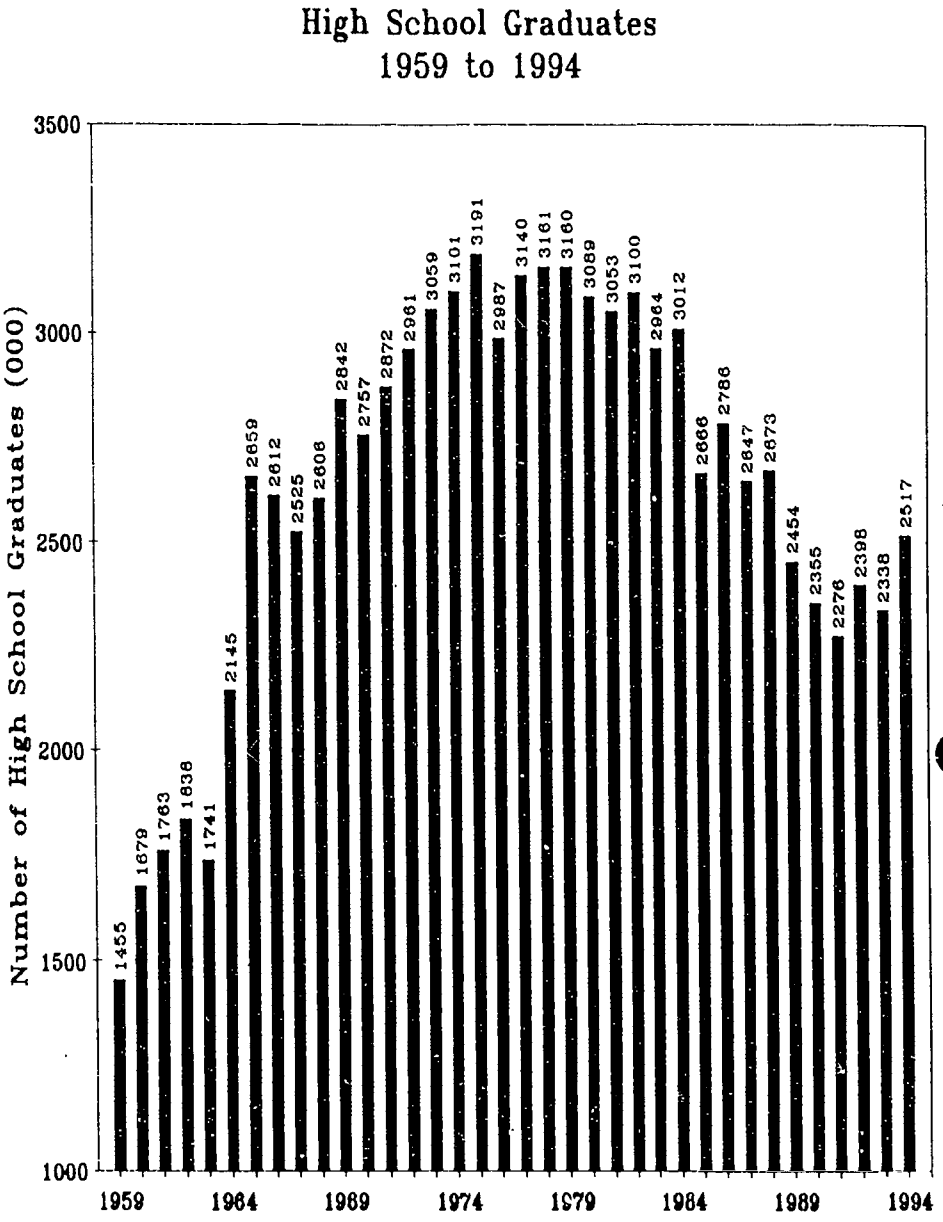
The Census Bureau population surveys are particularly valuable for the study of trends and patterns in higher educational opportunity because they collect information on those who do not enroll in college as well as those who do. In contrast, enrollment surveys conducted by the National Center for Education Statistics count only those enrolled in college. Without information on those who do not continue their educations after high school, the analysis of trends and patterns of educational opportunity is difficult at best and probably impossible.

High School Graduates

In 1994 there were 2.5 million high school graduates. This was up from 2.3 million in 1991, but well below the peak of 3.2 million in 1975.

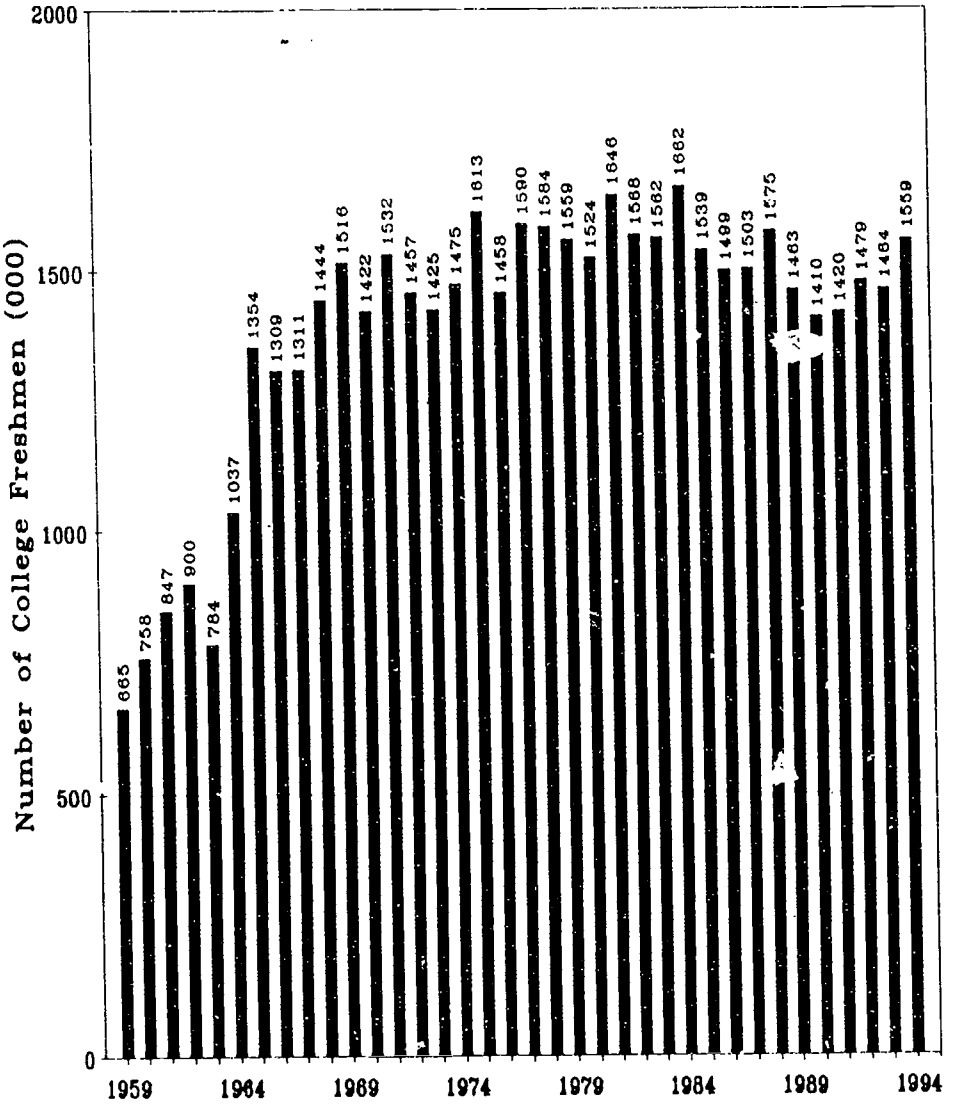
This pattern--charted at right--is a reflection of the numbers of live births 18 years earlier. The post-World War II baby boom that occurred in the late 1940s showed up in high school graduates 18 years later, or in 1964 as shown in this chart. The baby boom continued through 1966.

The baby bust followed the boom. After about 1984 the number of high school graduates began a sharp decline that last through 1991. Sure enough 18 years earlier the number of babies born had declined from about 1966 through about 1973.



In 1994 the 2.517 million high school graduates were distributed as follows. By gender, 49.4 percent were male (compared to 48.5 percent in 1976 and 45.6 percent in 1959) and 50.6 percent were female. By race, 82.0 percent were white in 1994 (down from 88.4 percent in 1976 and 93.2 percent in 1960), 18.0 percent were black (compared to 10.7 in 1976), and 5.3 percent were of other race, mainly Asian (compared to 0.9 percent in 1976).

College Freshmen Who Were Recent High School Graduates 1959 to 1994



By ethnicity Hispanics (which may be of any race) were 7.1 percent of the high school graduate population in 1994, compared to 5.1 percent in 1976.

The resurgence in live births after 1973 is now being reflected in the growing numbers of high school graduates since 1991--eighteen years later. This resurgence is caused by the post-World War II baby boom being of child-bearing age. The National Center for Education Statistics projects continued growth in the numbers of high school graduates to 2.8 million by 2000 and to 3.0 by 2005.

The distribution of this growth in high school graduates in future years will vary substantially from state to state depending on such factors as the number of women of child-bearing age in each state, the rate at which they bear babies, and migration.

College Freshmen

The numbers of college freshmen who have enrolled in college immediately following high school graduation are shown on the chart on the left. In October of 1994 there were 1.559 million college freshmen who had graduated from high school in the previous twelve months.

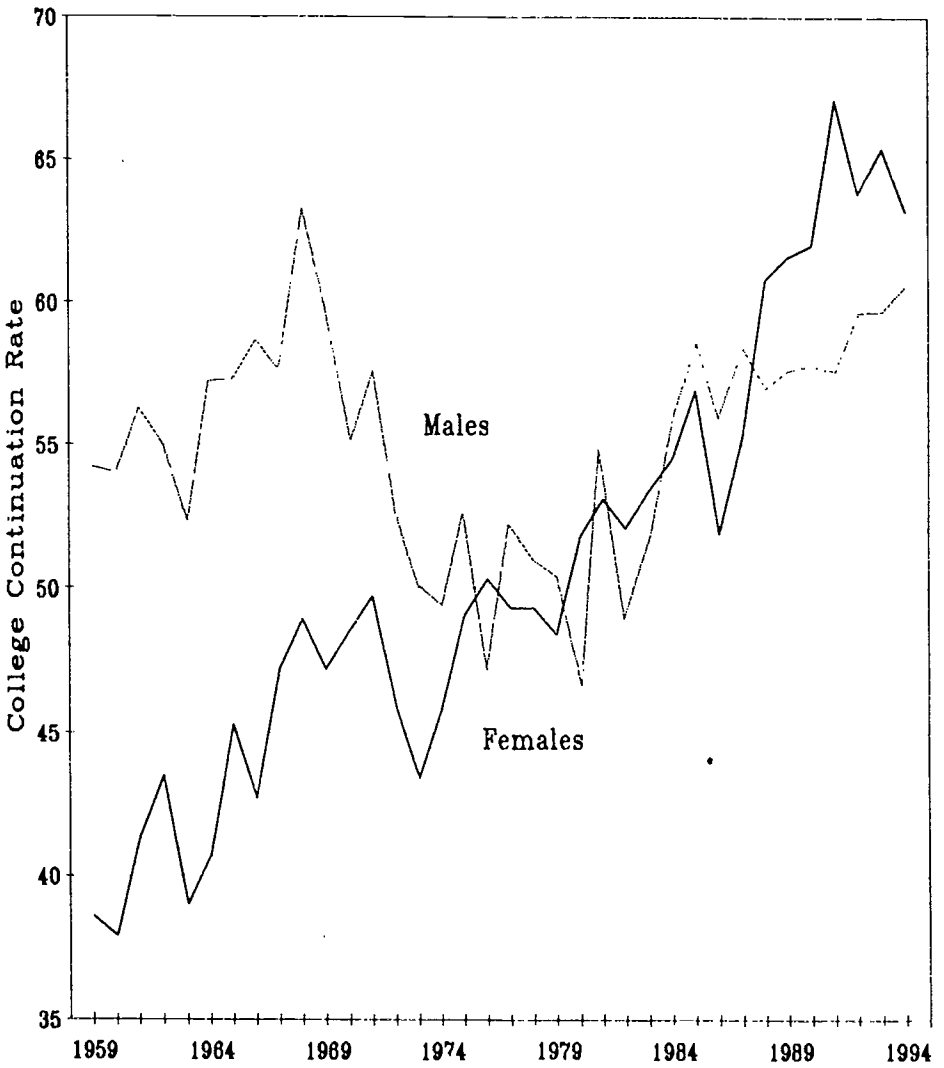
Unlike the high school graduate chart, the numbers of college freshmen who were recent high school graduates has remained quite stable over the last twenty-five years at close to 1,500,000 per year. This results, of course, from the increasing rate at which high school graduates enrolled in college between about 1979 and 1991.

Had the college continuation rate remained flat during this period, then the shape of the college freshmen curve would have closely resembled the shape of the high school graduate population curve during these years. Effectively, the increase in the college continuation rate between 1979 and 1991 accounted for about 300,000 or 20 percent of the 1.5 million college freshmen entering colleges between 1991 and 1994.

In 1994 the distribution of college freshmen by gender was 48.4 percent male, compared to 46.0 percent in 1980, 51.9 percent in 1970, and 54.1 percent in 1959. The distribution of college freshmen was 84.2 percent white in 1994, compared to 88.5 percent in 1976 and 94.6 percent in 1960. The proportion of freshmen that were black was 10.4 percent in 1994, compared to 9.2 percent in 1976. The proportion of freshmen that were of other race (Asian) was 5.4 percent in 1994, compared to 2.3 percent in 1976.

By ethnicity, the proportion of freshmen that were Hispanic was 5.6 percent in 1994, compared to 5.5 percent in 1976.

College Continuation Rates by Gender for Recent High School Graduates 1959 to 1994



In proportion to their representation in the high school graduate population, whites and those of other race (mainly Asian) were slightly over-represented in college freshmen enrollments, while blacks and Hispanics were under-represented

The future numbers of college freshmen are more difficult to project because of the voluntary nature of collegiate enrollment and because the cost-shifting from taxpayers to students appears to be dampening student enrollment demand for higher education, particularly among students from families dependent on financial aid to help finance college attendance costs.

College Continuation Rates

The chart on page 7 plots the proportion of recent high school graduates enrolled in college for the 36 years between 1959 and 1994. The trends were substantially influenced by the Vietnam War in the late 1960s. Otherwise the general trend is toward substantial growth, particularly after the early 1970s when the labor market for workers without higher education soured (see following article). Between 1973 and 1991, the college continuation rate for recent high school graduates increased from 46.6 to 62.4 percent. This increase in the college continuation rate added hundreds of thousands of additional students to freshmen college enrollments.

Since 1991 college freshmen enrollments have continued to increase. But for the first time in decades this increase is not due to an increase in the college continuation rate, but rather results directly from the increasing numbers of high school graduates.

Gender

College continuation rates for male and female recent high school graduates show very different trends over the last 36 years, as shown in the chart. Truly men are from Mars and women are from Venus: it is difficult to believe that men and women inhabit the same world given the enormous differences in the rate at which they have enrolled in college following high school over this period.

Male college continuation rates were stimulated by the military service draft during the Vietnam War (and exemption from that draft for full-time collegiate enrollment), dropped off after the draft was ended, and only began a modest recovery during the early 1980s. By 1994 the male college continuation rate was back up above 60 per cent (60.6) for the first time since 1969 during peak War years, but still below the peak of 63.2 percent reached in 1968.

The data convey a completely different story for women. Their college continuation rate increased from 37.9

percent in 1960 to a peak of 67.1 percent in 1991. By 1994 it had dropped off to 63.2 percent.

Between 1959 and 1994, when the male college continuation rate increased by 6.4 percent, the rate for females increased by 24.6 percent. As changes in the labor market for workers with different levels of education have clearly called for higher levels of educational attainment, women appear to have responded while most men were asleep.

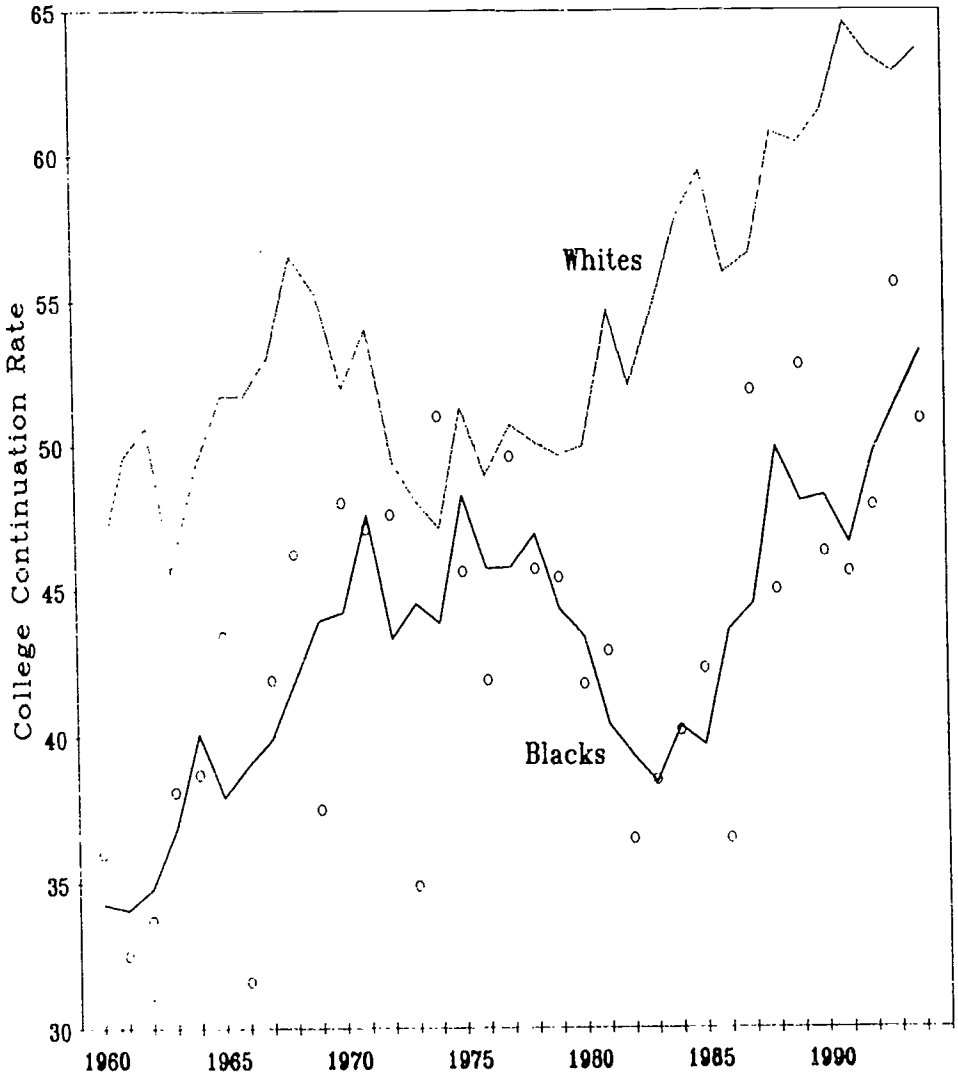
Race/Ethnicity

Despite many federal and state executive, legislative and judicial attempts to deny or ignore racial/ ethnic differences, the Bureau of Labor Statistics data indicate substantial differences in college continuation rates between different population groups. Here we compare to whites the college continuation rates for blacks, Hispanics and other race (mainly Asians) for the years of available data.

Blacks: The chart on this page plots the proportion of recent white and black high school graduates enrolled in college over the last 35 years. The black data for the years 1960 through 1975 is for non-whites, and the data for 1976 through 1994 is for blacks. (In 1976, the first year in which black data is reported separately, blacks were 92 percent of the non-white high school graduates and 89 percent of the non-white college freshmen. By 1994 blacks were 70 percent of non-white high school graduates and 66 percent of non-white college freshmen).

In 1994 there were 318,000 black high school graduates, 162,000 of whom were enrolled in college by October of 1994, according to the Bureau of Labor Statistics. The continuation rate for blacks was 50.9 percent, compared to 63.6 percent for whites.

College Continuation Rates for White and Black Recent High School Graduates 1960 to 1994



Because of the small Current Population Survey sample, the reported data fluctuate substantially from year to year. Here we are mainly interested in the underlying trend to the data, and thus we have plotted a line representing a moving three-year average of the data reported by the Bureau of Labor Statistics. We believe this three-year moving average more fairly describes college continuation rates for blacks than does the quite spiky annual data.

The results are clear:

- The proportion of blacks continuing their educations in college has grown sharply over the last 35 years, from about 34 percent in the early 1960s to about 53 percent by 1994.
- Blacks lag whites in college continuation immediately after high school by a substantial margin. In 1994 the black college continuation rate was about eleven percentage points behind that of whites.

- This gap was nearly closed during the 1970s, but reopened in the early 1980s and has remained large since then. It shows no signs of closing.

Hispanics: The college continuation rate for Hispanic high school graduates was about 55 percent in 1994. The pattern for Hispanics is similar to that for blacks: little difference existed between rates for whites and Hispanics in the latter half of the 1970s, then a gap opened in the 1980s and has remained open ever since.

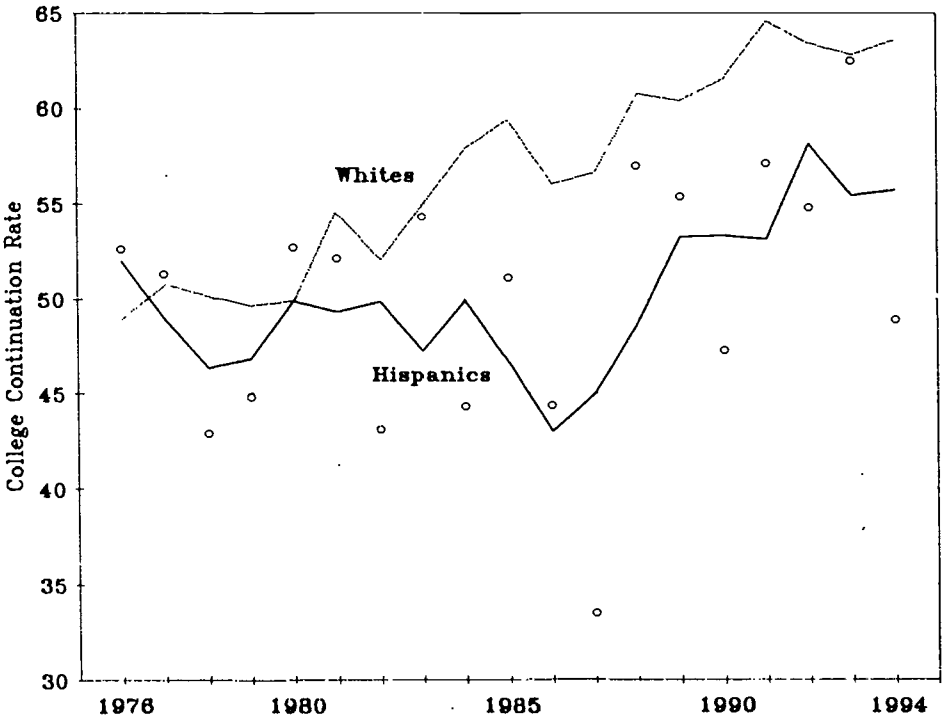
Other race: The college continuation rate for high school graduates of other race--mainly Asian, but including American Indians--has been well above the white rate since 1977. Until 1994 this rate hovered close to 75 percent. The small numbers sampling constraint of the Current Population Survey makes this data quite unstable from year to year. The moving three-year average, however, indicates that this group handles the transition from high school to college relatively best among those on whom data is reported.

Comment

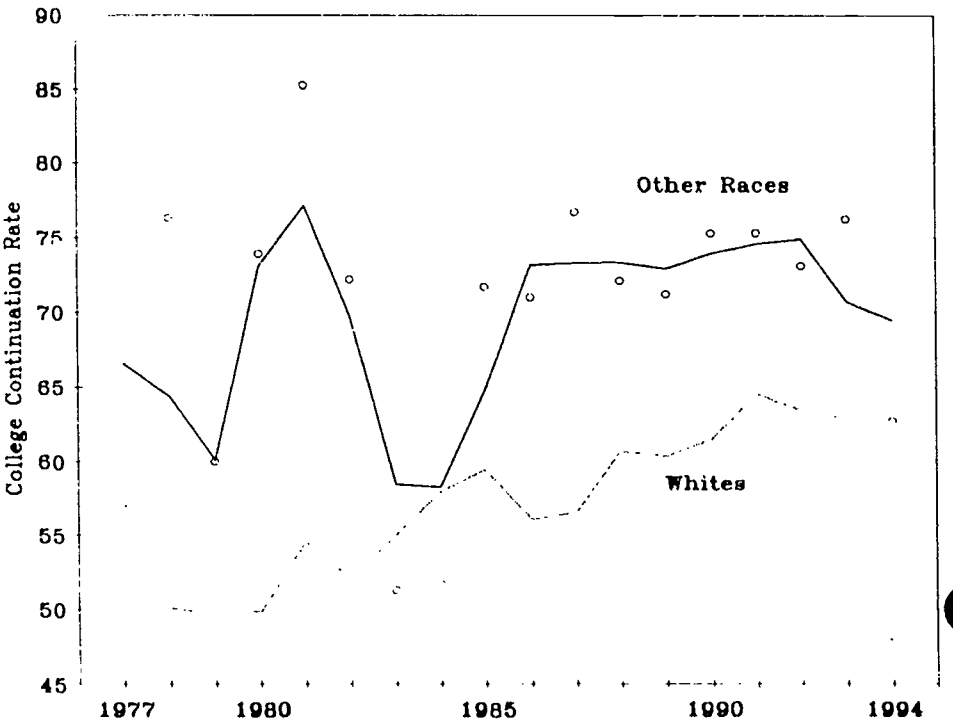
By all labor market data we have seen, the monetary return on a college education has continued to grow compared to the incomes of those without postsecondary education or training since 1991. Thus, the flat college continuation rate among recent high school graduates from 1991 through 1994 is somewhat puzzling.

Perhaps low unemployment rates during the recent expansion phase of this business cycle has mislead some potential college students to enter the labor force directly after high school. The next recession phase of the same business cycle could restore reality to their career plans and preparation.

College Continuation Rates
for White and Hispanic Recent High School Graduates
1976 to 1994



College Continuation Rates for White
and Other Race (Asian) Recent High School Graduates
1977 to 1994

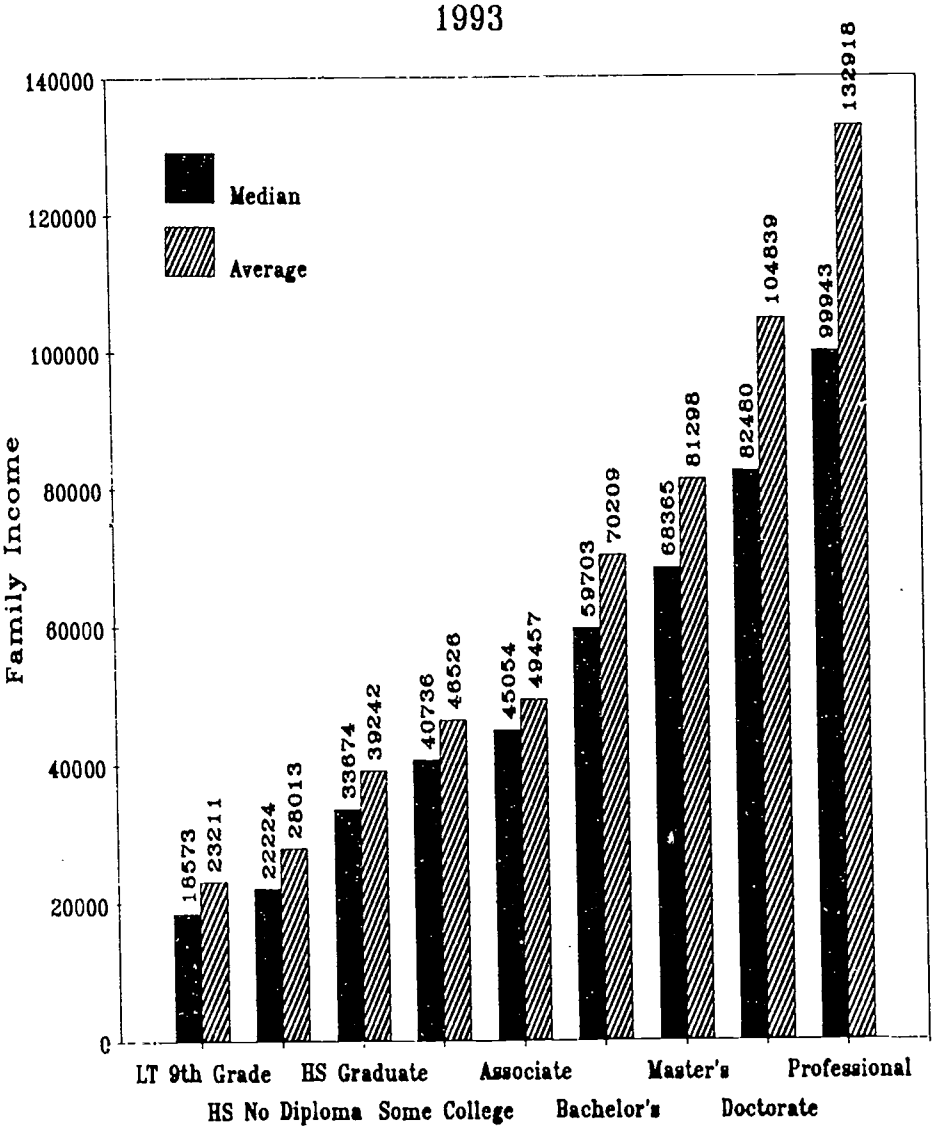


Family Economic Welfare and Parental Educational Attainment

There may be no more important story in demographic and economic data than the continuing redistribution of income and the standard of living that income provides and its relationship to educational attainment. For more than twenty years the dividing line between individuals and families that are surviving and thriving in this environment of rapid economic change and those that are failing has been educational attainment. Those that have the most education are thriving, while others with the least education are seeing their standard of living decline year after year.

We used to think that a person could make a good living for himself and his family if he were honest and hard working. Now he needs a working she, and both need extensive higher education to gain access to the better paying jobs in the labor force. Moreover, their incomes directly affect the living conditions in which they will raise the next generation.

Family Income
by Educational Attainment of Householder
1993



In this brief report, we analyze the relationship between educational attainment and family income. Because of the dynamics of the economy, we look carefully at *changes* in family income over time. Whereas educational attainment has always had a strong relationship to family income, changes in the educational requirements of the labor force during the last two decades have greatly magnified the importance of this relationship. Families headed by persons with at least a bachelor's degree from college are effectively participating in the economy. Other families headed by persons with high school educations or less have been in virtual economic free-fall since the early 1970s. The growing proportion of American children living below the poverty threshold is one direct consequence of inadequate educational attainment among parents subordinating their educations to child bearing.

The Data

Our data for these analyses are derived from Census Bureau reports from the *Current Population Survey* and published in the P60 series on consumer income. These data were collected in March of 1993, but not published until February of 1995.

Until this year these reports provided extensive information on income for persons, families and households. Beginning with 1993 data, however, budget cutbacks at the Census Bureau

have resulted in sharply reduced publication of reports from the *Current Population Survey*. The three thick reports that described income and poverty in great detail through 1992 were delayed and consolidated for 1993 into a single, thin and utterly inadequate skimpy little report. From now on, CPS data users must either retrieve data on their own at their own expense from released data files or call the Census Bureau and speak personally to staff responsible for CPS data collection and tabulation.

This new condition will inevitably greatly hinder social and economic data retrieval, analysis and reporting. When social and political change is occurring more rapidly and social policy is undergoing radical change, there will be less information published to help inform the processes of change. Maybe that is the intent: after all, why confuse imposed ideology with awareness of the reality of the human condition? It might expose the prevailing ideology of program elimination for the poor combined with tax cuts for the wealthy for the socially destructive policy of short-sighted greed that it is.

Family Income

Median family income for the 65,506,000 American families in 1993 was $38,231. Corrected for the effects of inflation, median family income has declined steadily since 1989 when it had peaked at $41,060.

Between 1956 and 1973 median family income in constant 1993 dollars had increased from $25,400 to $40,700. Family income stopped growing after 1973, and generally fluctuated between $36,000 and $41,000 between 1973 and 1993.

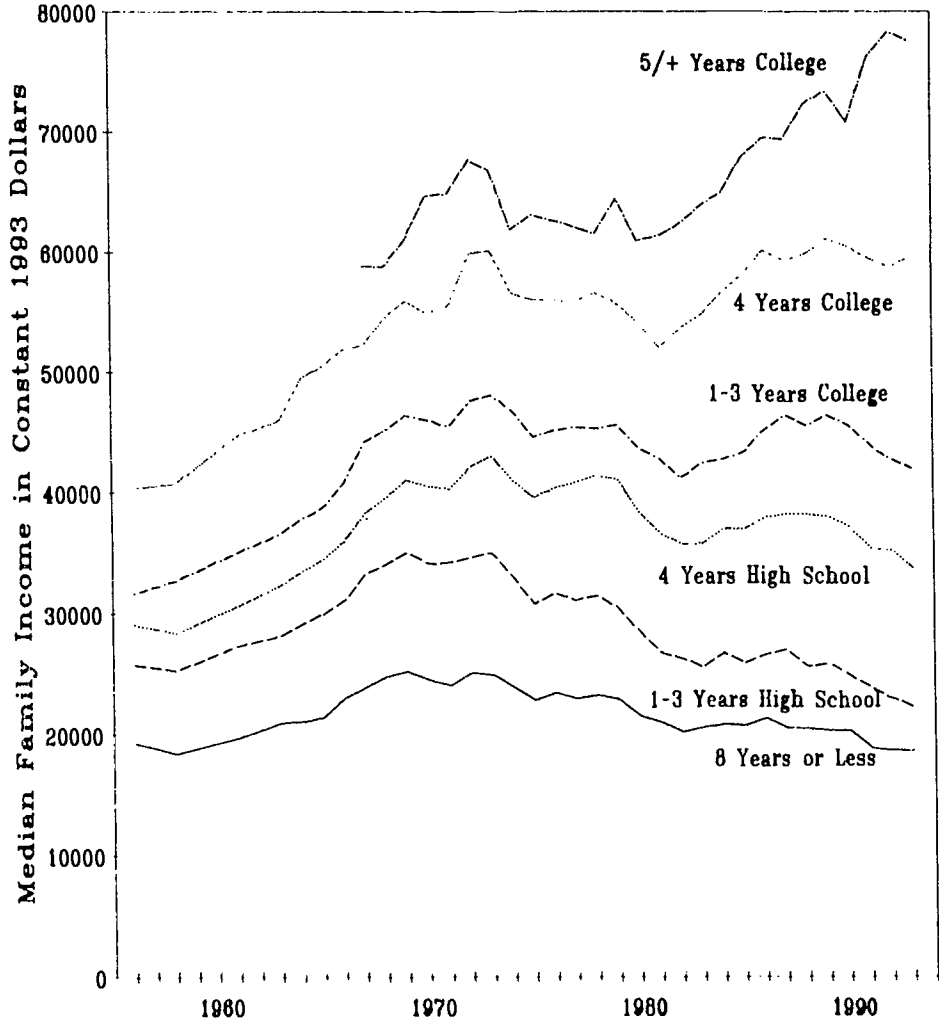
By levels of educational attainment, median family income in 1993 was $22,224 among those headed by high school drop-outs, $33,674 for families headed by high school graduates, $41,909 for families headed by adults with some college, $59,703 for families headed by persons with a bachelor's degree, and $77,500 for families headed by persons with five or more years of college.

Changes in Family Income

Despite the stagnation in median family income since 1973, substantial redistribution of family income has occurred during the last twenty years. Generally, family income has been redistributed from families headed by adults with lesser levels of educational attainment to families headed by adults with greater levels of educational attainment.

The families hardest hit by the decline in real income between 1973 and 1993 are those that had the lowest incomes to begin with. Among the 6,756,000 families headed by persons with one to three years of high school (but no diploma), median income was $34,960 in 1973 (1993 dollars) and had declined to $22,224 by 1993. This was a 36.4 percent decline over a twenty year period. The decline

Median Family Income
by Educational Attainment of Householder
1956 to 1993



occurred mainly between 1973 and 1983, and again between 1989 and 1993. This population appears to have been particularly hard-hit by the loss of high-wage, low-skill jobs in such fields as manufacturing that until about 1973 provided increasing real incomes.

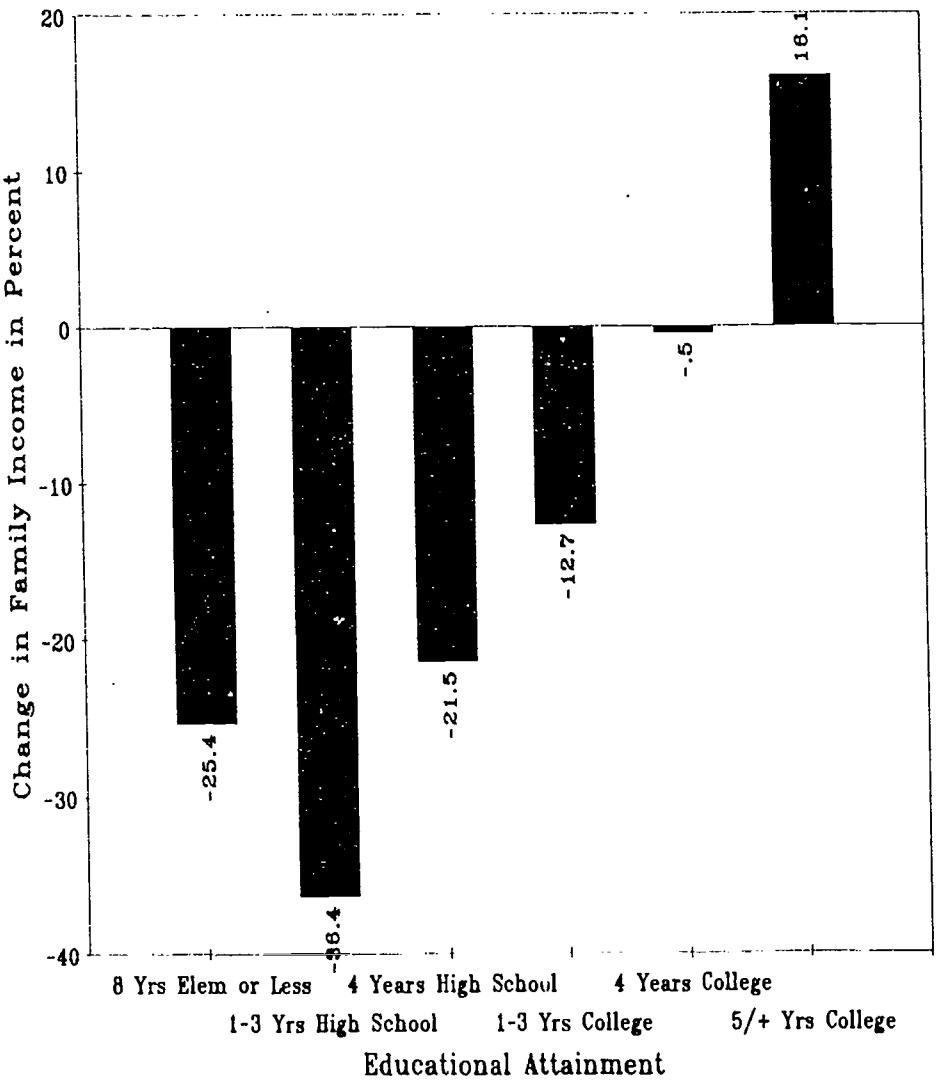
Families headed by high school graduates fared only slightly better between 1973 and 1993. In 1993 there were 21,340,000 such families. Median family income declined from $42,920 in 1973 to $33,674 by 1993. This was a 21.5 percent decline in constant dollars. All of this decline occurred during the same two periods that so adversely affected the incomes of high school drop-outs: 1973 to 1983, and 1989 to 1993.

Families headed by persons with 1 to 3 years of college in the 1956 to 1990 data become families headed by persons with some college but no degree and families headed by persons with associate degrees in the 1991 to 1993 data. In 1993 there were 11,815,000 families headed by persons with some college but no degree, and 4,408,000 families headed by persons with associate degrees. In 1993 their weighted median family income was $41,909, compared to $48,014 in 1973 (1993 dollars).

Family incomes for this group declined slightly between the peak in 1973 and 1989, to $46,310. However, between 1989 and 1993 the real incomes of this group have declined by 9.5 percent.

Median family incomes for families headed by persons with four years of college (1956 to 1990) and with bachelor's degrees (1991 to 1993) have remained quite stable since 1973. In 1993 there were 12,360,000 such families. In 1993 dollars, real incomes peaked at $60,026 in 1973, declined to $52,014 in 1981, and then increased to around $60,000 in 1986

Change in Median Family Income by Educational Attainment of Householder Between 1973 and 1993



and have remained at about that level through 1993. In 1993 the median family income for this group was $59,703.

The group whose real income growth has outstripped the eroding effects of inflation are families headed by persons with five or more years of college (1967 to 1990) or those headed by those with master's, doctor's or professional degrees (1991 to 1993). In 1993 there were 4,320,000 families headed by persons with master's degrees, 1,650,000 families headed by persons with professional degrees, and 1,149,000 families headed by persons with doctorates. Since the beginning of the 1980s, real incomes have increased from about $61,000 to $77,500 by 1993, and increase of 27 percent during this period.

Family Income Redistribution

As these data imply, there has been a substantial redistribution of family income between 1973 and 1993.

Families headed by persons with high school educations or less are notably less well off financially now than they were in the early 1970s. On the other hand, families headed by persons with education beyond the bachelor's degree are notably better off financially.

OPPORTUNITY has examined this redistribution from the perspective from federal income taxes paid (October 1994).

- In 1991 families headed by persons with four years or more of college constituted 23.0 percent of all families, earned 36.6 percent of all family income, and paid 43.2 percent of all federal personal income taxes.
- In 1970 such families were 13.6 percent of all families, earned 21.8 percent of all family income, and paid 26.7 percent of all federal personal income taxes.

What struck us from that analysis was that as the federal government has become increasingly dependent on the taxes paid by higher educated families it has reduced the share of federal government expenditures for the higher educations of taxpayers. Although by 1991 66.0 percent of all federal incomes taxes were paid by filers with at least some college education, the proportion of federal expenditures allocated to their higher educations was 0.7 percent. This was down from a peak of 0.95 percent in 1981.

Here we analyze the redistribution of family income across levels of parental educational attainment from another perspective: compared to college graduates.

- In 1956 families headed by persons with 1 to 3 years of high school earned about 64 percent of what families headed by persons with four years of college. That dropped to 62 percent by 1970, 53 percent by 1980, 41 percent by 1990 and to 37 percent by 1993.
- In 1956 families headed by high school graduates earned about 72 percent of what families headed by persons with four years of college earned. This rose to 74 percent by 1970, dropped slightly to 71 percent by 1980, dropped further to 61 percent by 1990 and most recently to 56 percent by 1993.
- Families headed by persons with 1 to 3 years of college earned 78 percent of what families headed by persons with four years of college earned in 1956. This rose and fell between 76 and 84 percent through 1990 when it still stood at 75 percent. However, by 1993 it had dropped to 70 percent.

We have neither seen, read, nor heard anything that suggests that family incomes for those with less than collegiate educations will rebound in the foreseeable future. The likely scenario is continued redistribution of family income along the axis measured by educational attainment.

Postsecondary Education
OPPORTUNITY

The Mortenson Research Letter on Public Policy Analysis of Opportunity for Postsecondary Education

Number 37 | Iowa City, Iowa | July 1995

Getting ready . . . *. . . for life*

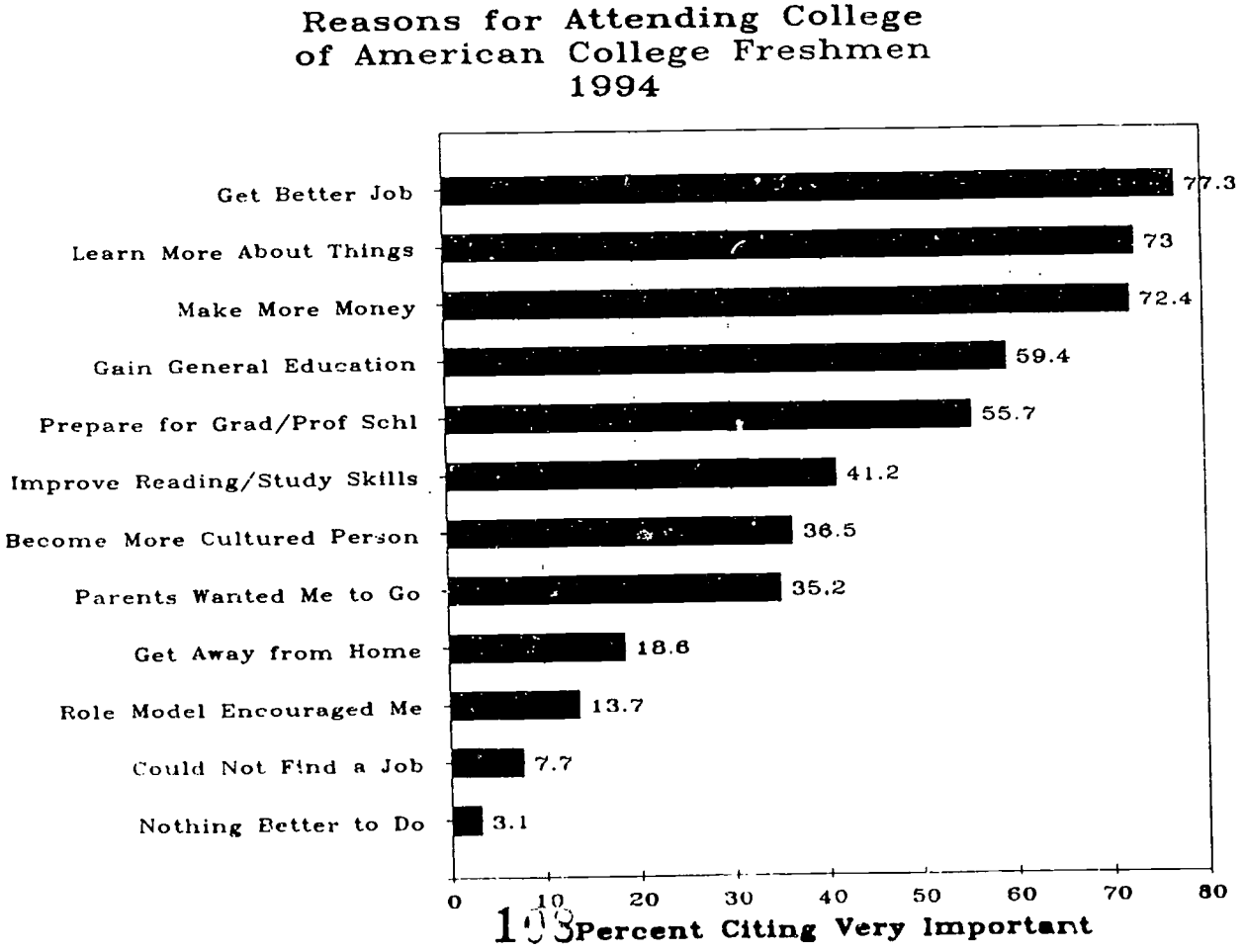
Why Freshmen Enroll in College

What motivates American college freshmen to enroll in college? What appeal is so great that it causes students and their families to spend many thousands of dollars each year for the chance to attend college? To leave home? To endure the seemingly endless pressures of reading, papers, quizzes and examinations?

The Cooperative Institutional Research Program of the American Council on Education and the University of California at Los Angeles asked this question of American College freshmen in 1971, and then asked it every year thereafter beginning in 1976. The results offer important insights into the motivation of first-time, full-time college freshmen for attending college.

We have analyzed published data from the freshman survey. We have also asked the CIRP staff at UCLA for additional special data tabulations from this rich data resource to gain additional insight. Some of the highlights of our analyses of these data include:

- *College freshmen give three main reasons for attending college: economic, liberal education and parental influence, in about that order. This pattern has persisted over more than two decades.*
- *College freshmen from lower family income backgrounds give greater weight to economic influences on college attendance than do students*



from higher income family backgrounds.

- *Freshmen in public colleges and universities give greater weight to economic influences than do students in private institutions.*
- *Students in private institutions give greater weight to liberal education considerations than do students in public institutions.*
- *Students from the lowest and highest family income backgrounds gave the greatest weight to liberal education influences, while students from middle family income backgrounds gave the least weight to liberal education influences.*
- *Between 1971 and 1994, the greatest growth in motivation for attending college was to a) improve reading and study skills, b) prepare for graduate/professional school, c) to make more money, and d) because parents wanted student to attend college.*

These and many other fascinating insights are gleaned from the rich freshman survey data. We summarize the story told by freshmen through their survey responses over the last two-and-a-half decades here. Their story is important insofar as public policy tries to influence college enrollment decisions of access, choice and persistence through preparation, recruiting, financial aid and other supportive services. Understanding what motivates students to attend college enables public policy to design programs that effectively reach and inform individuals who could profit from the collegiate experience.

The Data

The data used in the CIRP surveys that are analyzed and reported here are collected annually in a national survey of American college freshmen. This survey has been conducted each year since 1966; the most recent published report is for 1994. The survey collects descriptive information on first-time, full-time freshmen in public and private, two-and four-year colleges and universities. The collected data are then weighted to provide a normative profile of American college freshmen.

Astin, A. W., Korn, W. S., Sax, L. J., and Mahoney, K. M. (1994). *The American College Freshman: National Norms for Fall 1994.* Los Angeles: Higher Education Research Institute, UCLA.

In addition to the data published for 1994, we have used previous publications including the 1991 report summarizing data from the first 25 years of the freshman survey.

Dey, E. L., Astin, A. W., and Korn, W. S. (1991). *The American Freshman: Twenty-Five Year Trends.* Los Angeles: Higher Education Research Institute, UCLA.

Also, Bill Korn from UCLA provided special tabulations from the 1994 file that are summarized in this report. Copies of the freshman survey are available from UCLA.

The freshman survey asks the following question, which is the basis for our analyses:

In deciding to go to college, how important to you was each of the following reasons? (Mark <u>one</u> answer for each possible reason)
My parents wanted me to go
I could not find a job
Wanted to get away from home
To be able to get a better job
To gain a general education and appreciation of ideas
To improve my reading and study skills
There was nothing better to do
To make me a more cultured person
To be able to make more money
To learn more about things that

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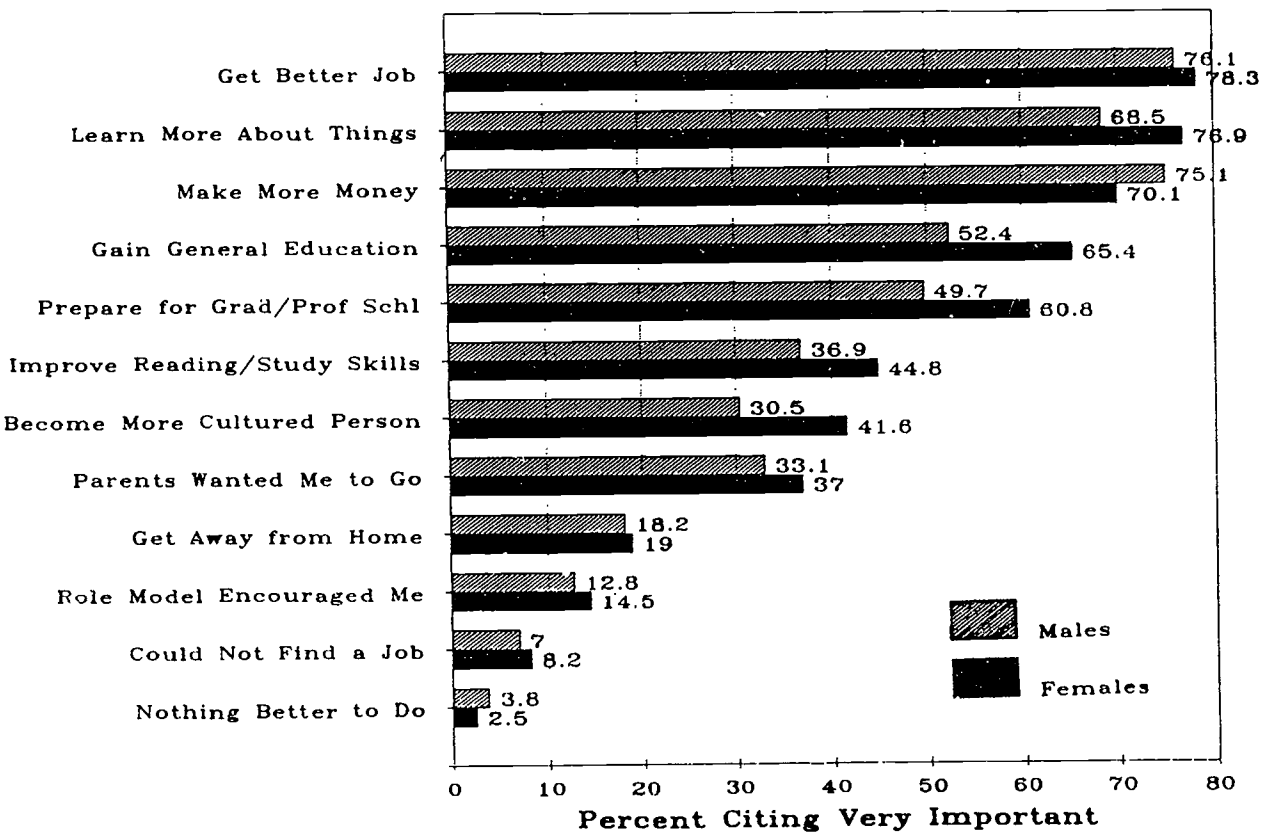
Mission Statement
This research letter is founded on two fundamental beliefs. First, sound public social policy requires accurate, current, independent, and focused information on the human condition. Second, education is essential to the development of human potential and resources for both private and public benefit. Therefore, the purpose of this research letter is to inform those who formulate, fund, and administer public policy and programs about the condition of and influences that affect postsecondary education opportunity for <u>all</u> Americans.

Reasons for Attending College of American College Freshmen by Gender 1994



interest me

To prepare myself for graduate or professional school

A mentor/role model encouraged me to go

Three response alternatives were provided: very important, somewhat important, and not important. Results used here are the percent of respondents checking the very important response.

The Results

As shown in the chart on page 1 of this issue, freshmen gave greatest importance to the role of collegiate education in preparing them for a better job than they would otherwise have access to. In 1994 77.3 percent cited this as very important among their reasons for attending college.

Over the history of the freshman survey, consistently over 70 percent of all freshmen cited this as a very important reason. In 1971, the first year the motivation question was asked, 77.0 percent cited this as very important. Also consistently, this has been the most frequently cited very important reason for attending college every year the question was asked.

The second most frequently cited very important reason for attending college is to learn more about things. Since first asked in 1971, the proportion of freshmen citing this has increased steadily, from 64.5 percent then to 69.7 percent by 1986 and 73.0 percent by 1994.

The highest ranking family influence on the college attendance decision in 1994 was parental desire. This too has grown over time, from 21.9 percent in 1971 to 35.2 percent by 1994.

Gender Differences

Generally males and females share similar patterns in motivations to attend college. Both give greatest weight to economic influences, followed by liberal education and family influences.

However, a few quite subtle and interesting differences are apparent in the gender data.

- Across nearly every response category, females were more likely than males to cite reasons for attending college as very important.
- These differences were greatest

when it came to gaining a general education (+13.0 percent), becoming a more cultured person (+11.1 percent), prepare for graduate/professional school (+11.1 percent), learn more about things (+8.4 percent), and improve reading/study skills (+7.9 percent).

- The male response exceeded the female response in only two response categories: make more money (+5.0 percent) and nothing better to do (+1.3 percent).

Apparently, women are more excited about the liberal education opportunities in collegiate study than are men. Men, on the other hand, appear to appreciate the economic role of higher education in preparing them for better paying jobs somewhat more than do women.

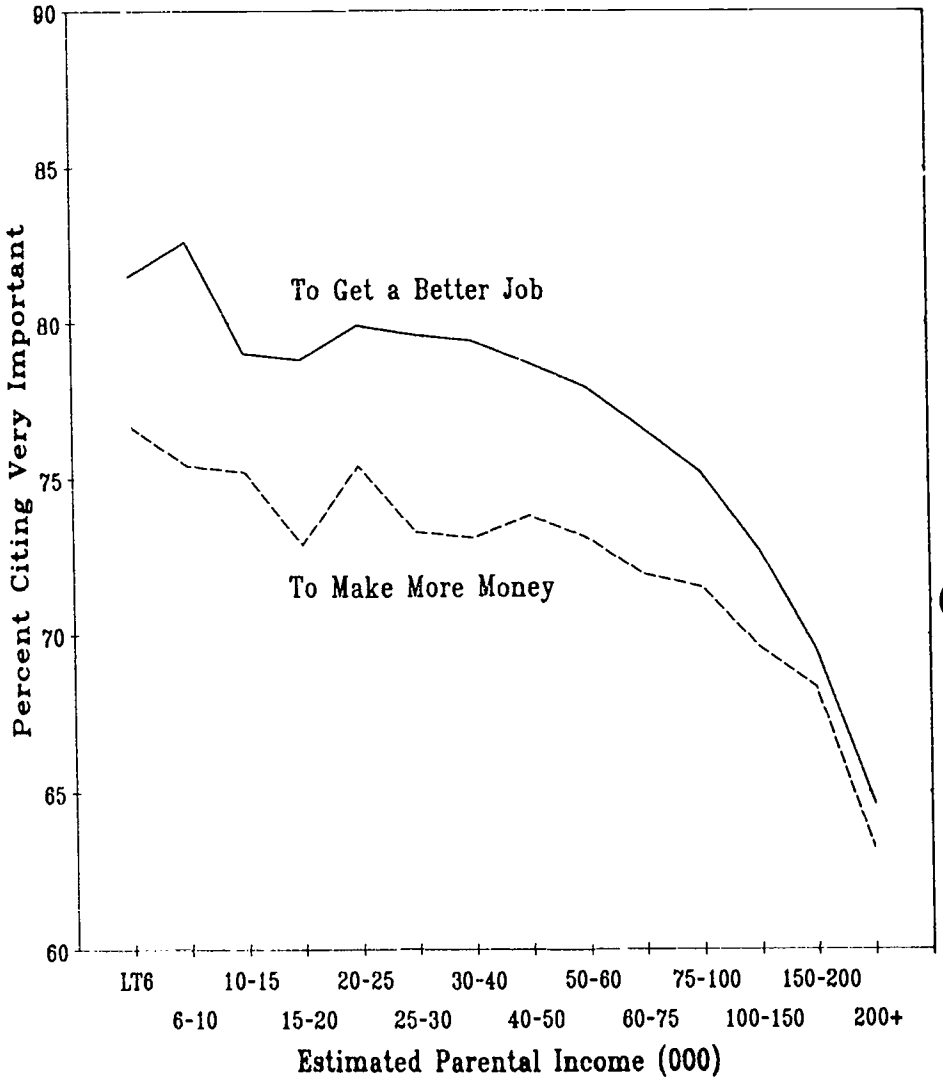
Economic, Educational and Family Influences

Family income is a common reference in the public policy analysis of educational opportunity. Besides being the basis for determining eligibility for most public student financial aid program benefits, family income is a tidy socioeconomic status measure. We analyze the reasons cited by college freshmen for attending college in terms of their estimated parental incomes through special tabulations from the 1994 data file.

Economic influences: Two responses to the freshman survey question are economic: get a better job and make more money. The chart to the right shows the proportion of survey respondents at each income interval citing these as very important reasons for attending college.

The pattern is clear and consistent for both responses: freshmen from the lowest income families are most likely to cite economic reasons for attending college, and freshmen from the highest income families are least likely to cite these economic influences as very important to their college enrollment decision. This drop-off is particularly noticeable above roughly $60,000 per year in estimated parental income.

Importance of Economic Factors on College Attendance by Estimated Parental Income 1994



Liberal education influences: A distinctly different pattern of responses across parental income levels results from analysis of data on general education influences. There are five such responses in the survey question:

- Learn more about things
- Gain general education
- Prepare for graduate/professional school
- Improve reading/study skills
- Become more cultured person

All five show the same pattern. College freshmen from the lowest and highest levels of parental income are the most likely to cite liberal education influences as very important to their college attendance decision. Freshmen from middle income ranges are least likely to give great weight to liberal education influences on their decision to enroll in college.

Family influences: The third category of influences are those related to families, and probably parents in particular. These influences include: parents wanted me to go, and wanted to get away from home.

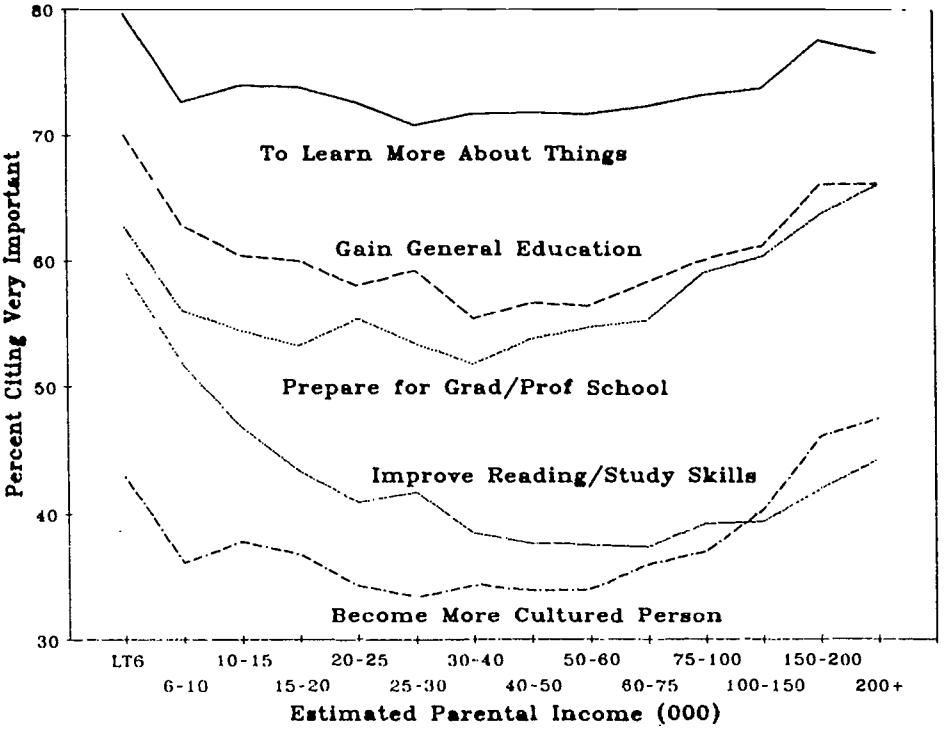
Here a third distinct pattern emerges. These family influences appear to increase with family income. While family influences are generally less influential than economic or educational influences, they are nevertheless recognizably important to more than a third of college freshmen. They are somewhat more recognizably more influential to students with higher parental incomes (and more likely to be college educated) than those from lower parental income (who are less likely to be college educated).

Institutional Type and Control

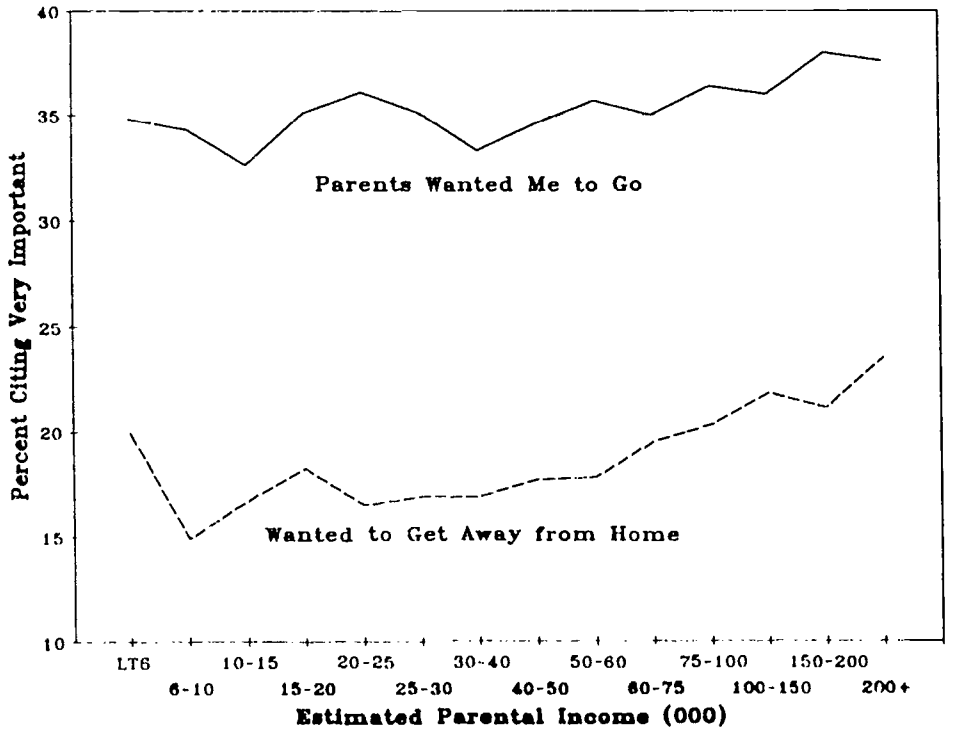
Different types of institutions serve freshmen with overlapping but differing backgrounds. Generally universities--both public and private--enroll freshmen from the highest family income backgrounds, and two-year colleges--both public and private--serve students from the lowest family income backgrounds. Thus, based on the preceding charts, we should expect freshmen enrolled in different types of institutions to exhibit somewhat different reasons for attending college.

In fact the expected patterns emerge in comparisons of responses for freshmen enrolled in different types of colleges and universities. Roughly speaking, freshmen enrolled in public colleges and two-year institutions give greater weight to economic factors in college attendance decisions than do students in private institutions and universities. We illustrate this in the first chart on the following page where the proportion of freshmen citing to earn more money as a very important reason for attending college are shown by institutional type and control. The

Importance of Educational Factors on College Attendance by Estimated Parental Income 1994



Importance of Family Factors on College Attendance by Estimated Parental Income 1994



black colleges have the highest proportion of freshmen citing this as very important, followed by all types of public institutions, followed by all types of private institutions.

Between those institutions serving the lowest family income background freshmen and those serving the highest the spread is nearly 25 percent. This difference must have an impact on the academic/vocational tenor of institutional life.

When a liberal education motivation is examined, a quite different pattern emerges. Once again freshmen in predominantly black colleges give great weight to gain a general education. But here private college freshmen are more likely than public college freshmen to give great weight to this factor in deciding to attend college.

Summary and Conclusions

The freshman survey data provide useful information to those who seek to understand and influence motivation to attend college after high school.

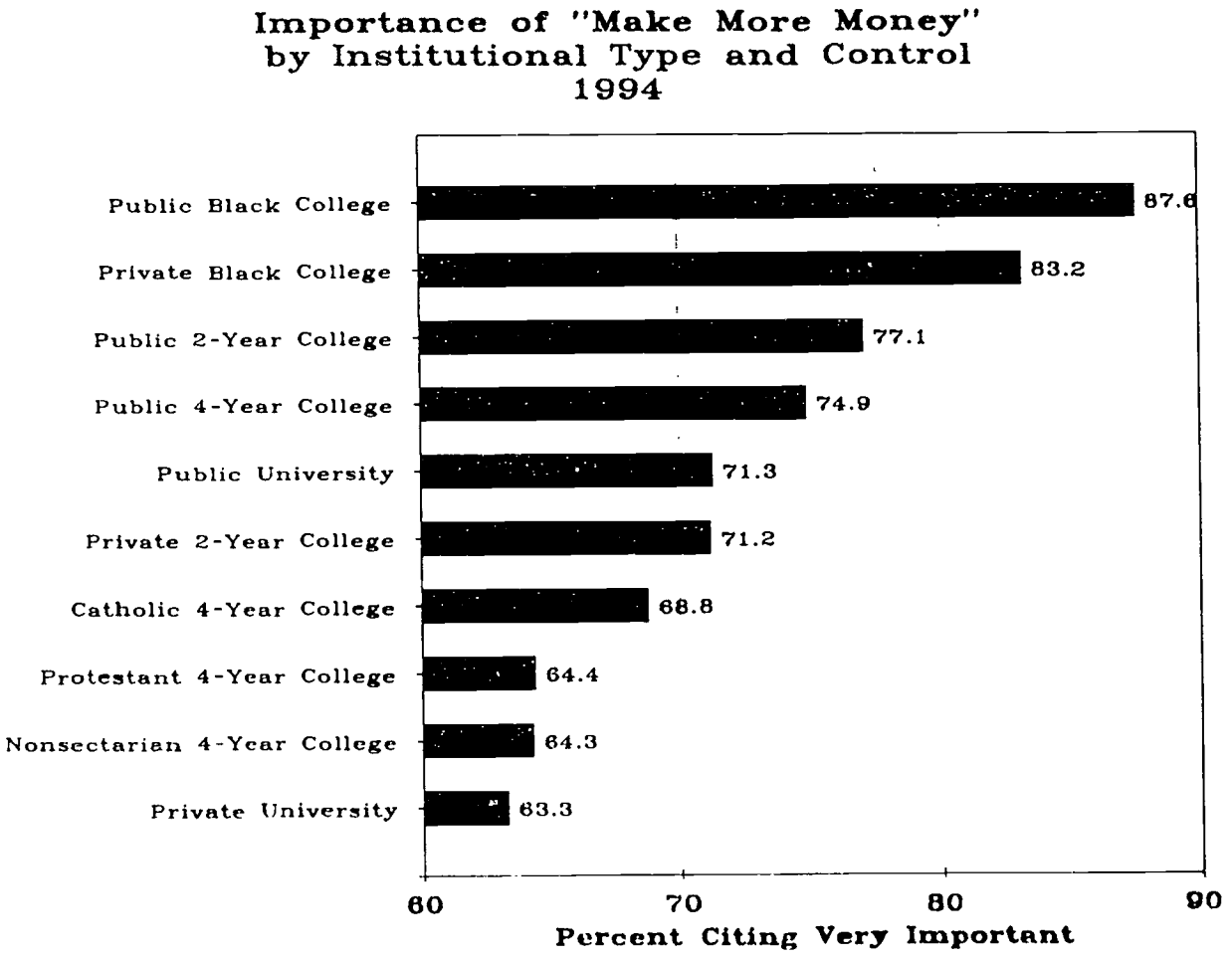
College freshmen report that they attend college for economic, liberal education and family reasons, in about that order. Women are more motivated than men by liberal education reasons, and men are more motivated by economic considerations.

Students from low income family backgrounds are motivated more by economic considerations than are students from high income families.

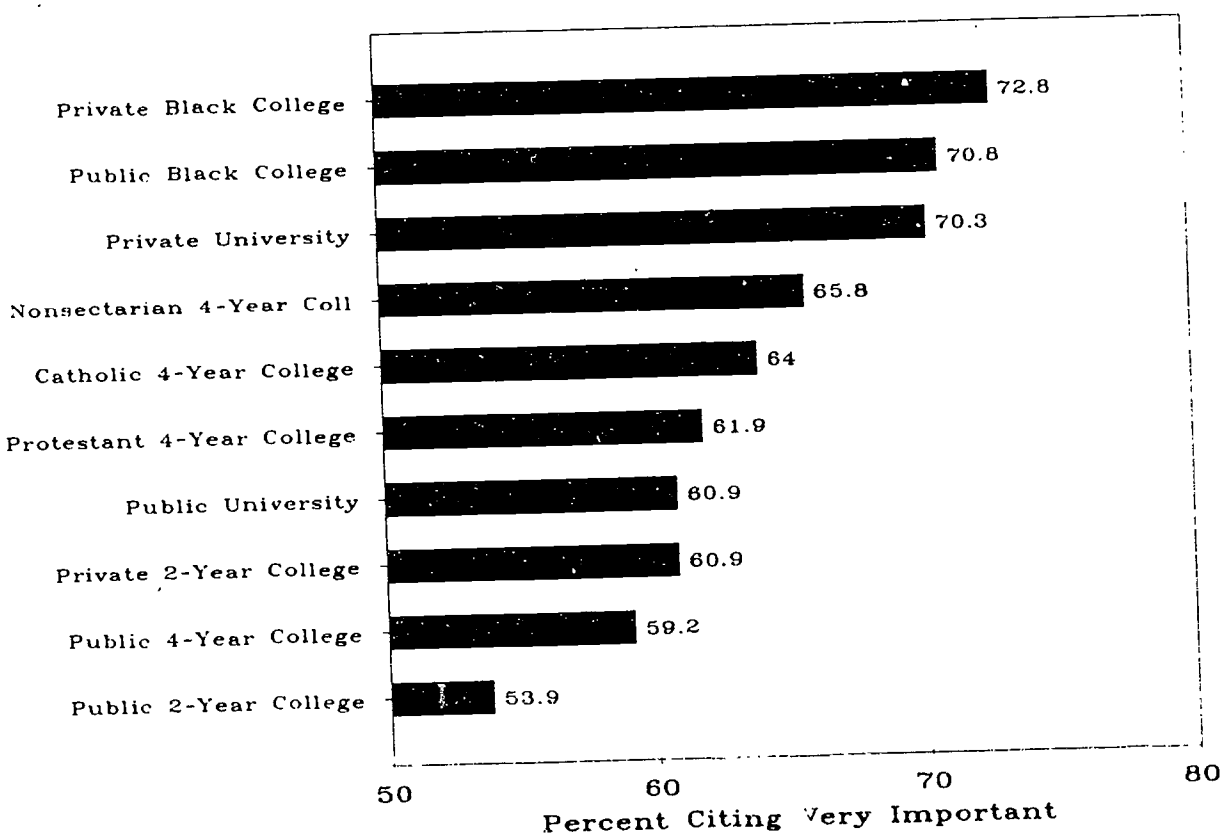
Students from high income families are somewhat more motivated by their families to attend college than are students from low income family backgrounds.

Freshmen from both low and high income families are more motivated to attend college by liberal education reasons than are students from middle income family backgrounds.

To the extent higher education institutions of different types and controls enroll students from different portions of the income distribution, the motivation of their freshmen differ. Economic interests motivate freshmen in public institutions somewhat more than they do freshmen in similar types of private institutions. However, public and private black colleges



Importance of "Gain General Education" by Institutional Type and Control 1994



enroll freshmen most motivated by either economic or educational considerations.

Much of existing public policy regarding opportunity for postsecondary education and training is focused on removing barriers. Foremost among these are the financial barriers imposed by limited family resources to pay college attendance costs. Government financial aid programs were created to assist students and their parents to finance these costs and hence surmount the price barrier.

Other barriers include inadequate academic preparation for collegiate study, racial and ethnic discrimination, limited information to prospective students on the benefits of higher education, etc. Different public policy responses are appropriate to effectively removing these barriers to opportunity.

The freshman survey data provide an additional framework for thinking about broadening opportunity for postsecondary education and training. Instead of removing barriers, public policy can consider informational roles to different target populations of prospective students (something we at OPPORTUNITY have been devoted to for the last three-and-half years).

The economic and educational benefits of college attendance may not be well known or appreciated by students who choose not to continue their formal educations after high school. Surveys of parents of junior high school students in Illinois, and junior high school students themselves in Pennsylvania, have found both lack of knowledge among both these students and their parents, and high anxiety about lack of information among parents.

Dixon, R. J. (1986). *Parents of Illinois Eighth Graders: A Survey of Their Knowledge about Academic and Financial Planning for Their Child's Education Beyond High School.* Springfield, Illinois: Illinois State Scholarship Commission.

Especially among the most vulnerable populations--e.g., low and middle income, first generation, racial/ethnic minority, disabled--lack of information about the economic and enlightening benefits of collegiate study may in their own ways impose barriers to opportunity that other public policy programs, e.g. student financial aid, attempt to address.

State Policies on Educational Opportunity through State Student Financial Aid Laws

State laws creating state student financial aid programs provide one useful perspective on how different states view the public interests served by expanding postsecondary education opportunity through financial aid programs. We have collected here three declarations of purpose commonly found in state laws that chart this aspect of state involvement in fostering educational opportunity.

Illinois

The Illinois Student Assistance Law was passed by the Illinois General Assembly in 1967. Among other things, the law created the Monetary Award Program (MAP) which is now the second largest state grant program among the states. For the 1995 fiscal year Illinois appropriated $244 million for grants to about 119,000 Illinois resident undergraduates.

> *The General Assembly has found and hereby declares that the provision of a higher education for all residents of this State who desire such an education and are properly qualified therefor is important to this State and Nation; and consequently is an important public purpose; many qualified students are deterred by financial considerations from completing their education, with a consequent irreparable loss to the State and Nation of talents vital to welfare and security. The number of qualified persons who desire higher education is increasing rapidly, and the physical facilities, faculties, and staffs of the institutions of higher learning operated by the State will have to be expanded greatly to accommodate such persons, with an attendant sharp increase in the cost of educating such persons. A system of financial assistance of scholarships, grants, and guaranteed loans for qualified residents of college age will enable them to attend qualified institutions of their choice in the State, public or private.*

Pennsylvania

The Commonwealth of Pennsylvania enacted legislation creating state student financial aid programs in 1966. The primary state student grant program administered by the Pennsylvania Higher Education Assistance Agency is the State Grants Program. For fiscal year 1995 Pennsylvania appropriated $209 million for State Grants to 142,000 students.

> *Although the enrollments of postsecondary institutions of higher learning of this Commonwealth and throughout the nation continue to increase at a rapid pace, and although larger numbers of the Commonwealth's children graduate from both public and nonpublic secondary schools each year, there continues to be a tragic underdevelopment of the Commonwealth's human talent because of the inability of many needy students to finance a postsecondary education program. The Commonwealth of Pennsylvania can achieve its full economic and social potential only if every individual has the opportunity to contribute to the full extent of his capabilities and only when the financial barriers to his economic, social, and educational goals are removed. It is therefore the policy of the Legislature and the purpose of this act to establish a broad-scale State scholarship program designed to guarantee that the most able students from all sectors of the Commonwealth, the most needy students and students with the capability to successfully complete postsecondary educational programs, and deserving postsecondary students are given the opportunity to continue their program of self-improvement in an institution of higher learning of their choice.*

Washington

The State of Washington initiated its student financial aid programs in 1969. Currently the major programs offered by the State to its citizens include the State Need Grant Program and the State Work-Study Program. For the 1995 fiscal year Washington appropriated $51 million for State Need Grants to 38,000 students.

> *The Legislature hereby declares that it regards the higher education of its qualified domiciliaries to be a public purpose of great importance to the welfare and security of this state and nation; and further declares that the establishment of a student financial aid program, assisting financially needy and disadvantaged students in this state to be a desirable and economical method of furthering this purpose. The legislature has concluded that the benefits to the state in assuring the development of talents of its qualified domiciliaries will bring tangible benefits to the state in the future.*

Academic preparation . . . *. . . for College*

Academic Core Course Completion by High School Graduates, 1982 to 1992

In 1983, **A Nation at Risk** *assessed the performance of American schools and their students and concluded that our society had "lost sight of the basic purposes of schooling, and of high expectations and disciplined effort needed to attain them."*

The Commission's report recommended that all students graduating from high school complete a core curriculum consisting of the "New Basics":

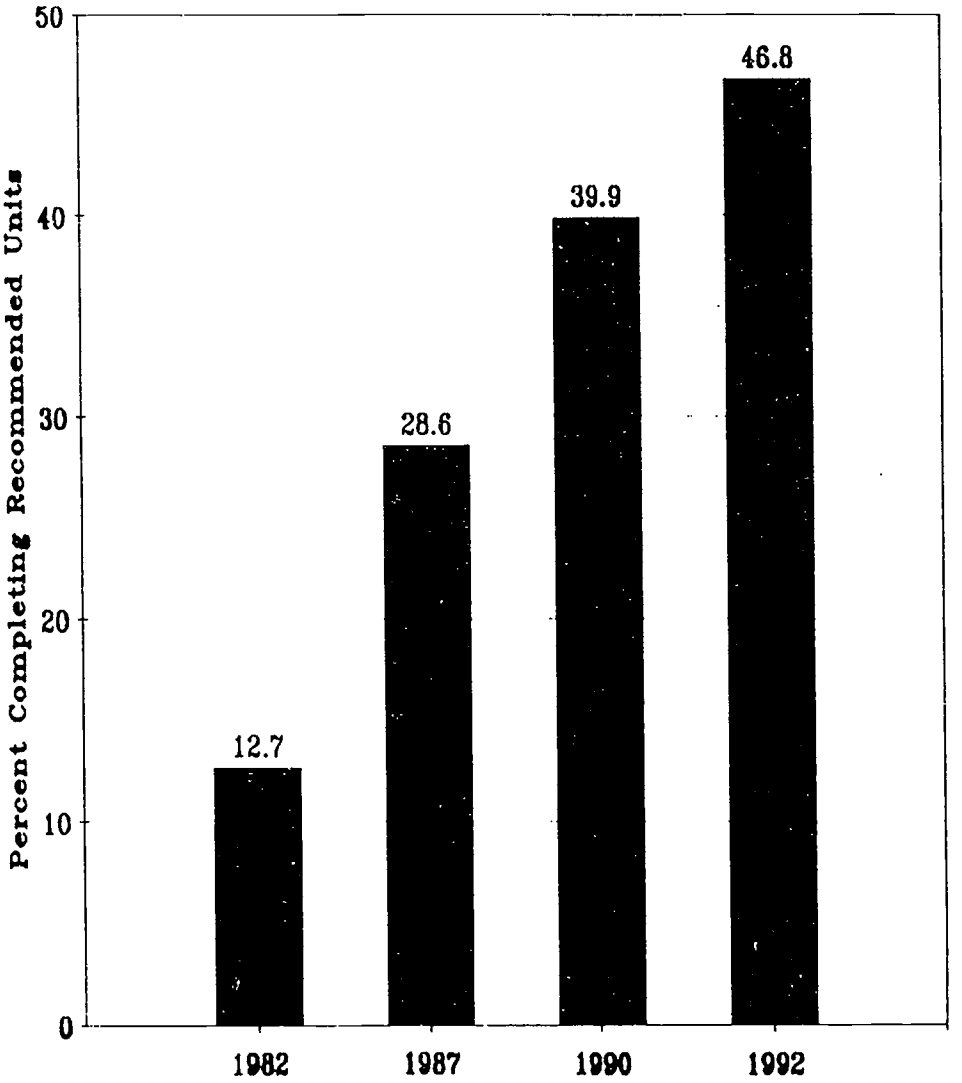
- *Four units of English*
- *Three units of science*
- *Three units of social studies*
- *Three units of mathematics*
- *One-half unit of computer science.*

Subsequently, analysis of several national data files has found that indeed states, schools and students have responded: between 1982 and 1992, the proportion of high school graduates that have completed the first four of the above New Basics academic core curriculum units rose from 13 to 47 percent.

Here we present the summary of the relevant national educational data files regarding academic core curriculum. These data are especially important to higher educational institutions that often unwillingly assume remedial educational roles for ill-prepared but admitted students.

As colleges and universities undergo tightened budget constraints and increasing government scrutiny--both federal and state--remedial educational functions of higher education are likely to be challenged as beyond institutional mission and purpose. Raising admissions criteria in public universities has been one reported response to budget pressures. The victims of such restrictions on higher educational opportunity are usually disproportionately the most vulnerable, least represented populations served by higher education.

Core Curriculum Course Completion for High School Graduates 1982 to 1992



The Data

The sources of data used in this report are all national. They involve collection and analysis of high school transcripts.

- For the 1982 data, high school graduate course data were taken from the High School and Beyond Transcript Study. This was a follow-up to the 1980 HS&B longitudinal survey of high school sophomores and seniors.

Transcripts were analyzed for about 12,000 1980 high school sophomores.

- The 1987 and 1990 transcript data were collected as a part of the National Assessment of Educational Progress.
- Data for 1992 were abstracted from the National Educational Longitudinal Study transcripts.

The summary of these analyses have been published by the National Center for Education Statistics.

Smith, T. M., and others. (1994). *The Condition of Education 1994.* Washington, DC: National Center for Education Statistics, Office of Educational Research and Improvement.

Academic Core Course Completion

When *A Nation at Risk* was being prepared in 1982, just 12.7 percent of all high school graduates had completed four years of English, three years of science, three years of social studies, and three years of mathematics. Ten years later, in 1992, 46.8 percent of all high school graduates had completed this academic core coursework. By any measure, this represents substantial progress in college preparation by high school graduates.

When the half-year of computer science is added, the proportion of high school graduates meeting this higher hurdle rose from 2.1 percent in 1982, to 16.3 percent by 1987, to 22.7 percent by 1990 and 29.4 percent by 1992.

The authors of *A Nation at Risk* also recommended that high school graduates planning to enroll in college also take 2 units of a foreign language. When this added to the above curriculum, the proportion passing this highest hurdle increased from 1.6 percent in 1982, to 12.0 percent by 1987, 17.3 percent by 1990 and 23.3 percent by 1992.

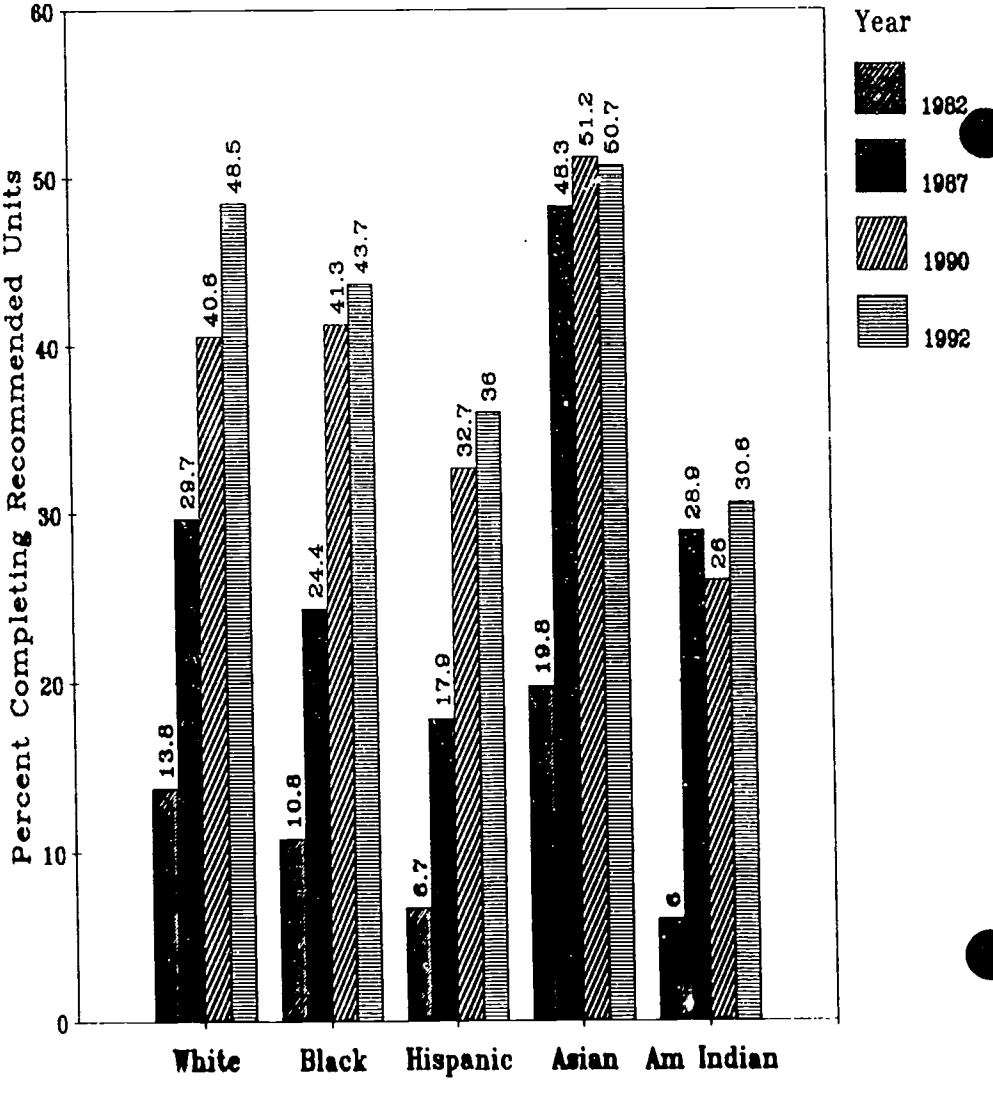
While 46.8 percent of the 1992 high school graduates had completed the English, science, social studies and mathematics unites, 17.4 percent or a third of these did not complete the computer science half-unit. Another 6.1 percent did not complete the two foreign language units by graduation.

Race/Ethnicity

The sharp increase in the proportion of high school graduates completing the core units in English, science, social studies and mathematics occurred across all major racial/ethnic groups, as shown in the above chart.

- Asian high school graduates were most likely to have completed these core units in all four years, followed by whites, blacks and Hispanics. Generally, American Indian high school graduates were

Core Curriculum Course Completion
for High School Graduates by Race/Ethnicity
1982, 1987, 1990 and 1992



least likely to complete these courses by graduation.

- The largest gain was made by whites (+34.7%), followed by blacks (+32.9%), Asians (+30.9%) and Hispanics (+29.3%). The smallest gain was made by American Indians (+24.6%).
- Between 1987 and 1992, whites, blacks and Hispanics continued to make substantial gains. However, progress stopped after 1987 for Asians and American Indians.

When the half-unit of computer science is added, the proportion completing the higher hurdle is 32.2 percent for Asians, 29.6 percent for whites, 28.7 percent for Hispanics, 27.6 percent for blacks and 22.1 percent for American Indians. From these data it appears that whites and Asians who have completed the first four core units have the most difficulty completing the half-unit of computer science, and Hispanics and American Indians have the least difficulty.

When the two units of foreign language are added, the proportion completing all six unit areas is 29.4 percent for Asians, 23.7 percent for whites, 21.9 percent for blacks, 20.0 percent for Hispanics and 11.4 percent for American Indians. From these data it appears that American Indians and Hispanics have the greatest difficulty getting in two years of a foreign language, and Asians have the least trouble.

Gender

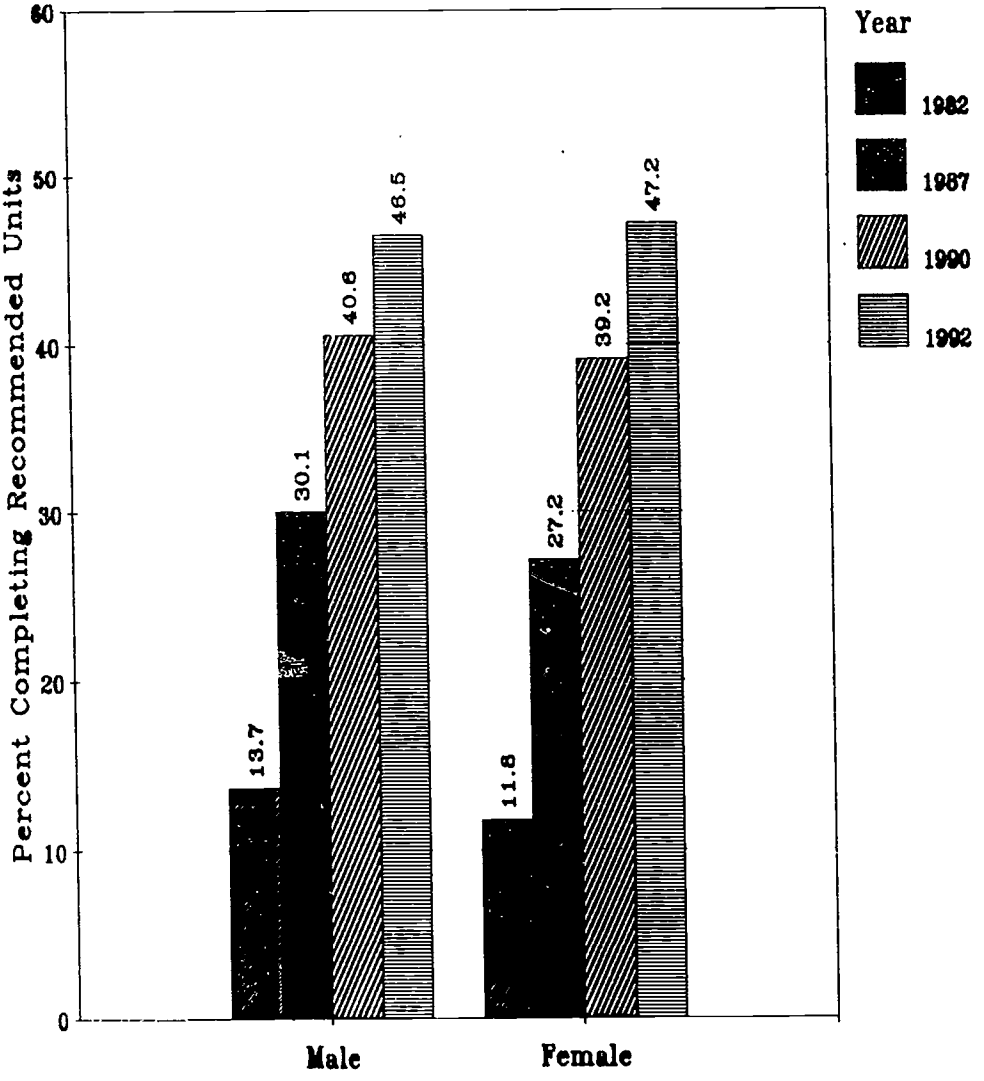
Male and female high school graduates show similar rates of completion of the four core academic units. By 1992 46.5 percent of the males and 47.2 percent of the females had completed the first four areas of the New Basics.

However, between 1982 and 1992, the proportion of female high school graduates completing the four core units increased by 29.2 percentage points, compared to 25.2 for males. For each year 1982, 1987 and 1990, the proportion of males completing the four core areas was greater than the proportion for females. This reversed in 1992, however, when females surpassed males.

The strength of the data in 1992 for females compared to males carries over into the additional areas of computer science and foreign language. When the computer science half-unit is added to the four core units, 29.2 percent of the females passed the higher hurdle compared to 25.2 percent for the males.

When the two foreign language units are added, 24.3 percent of the females and 19.0 percent of the males have passed the highest hurdle. More female than male high school graduates completed both the computer science and foreign language units in 1992.

Core Curriculum Course Completion
for High School Graduates by Gender
1982, 1987, 1990 and 1992



Public and Private High Schools

In 1992 65.7 percent of all private high school graduates completed the English, science, social studies and mathematics core units. By comparison only 44.8 percent of all public high school graduates had met the same standard that year.

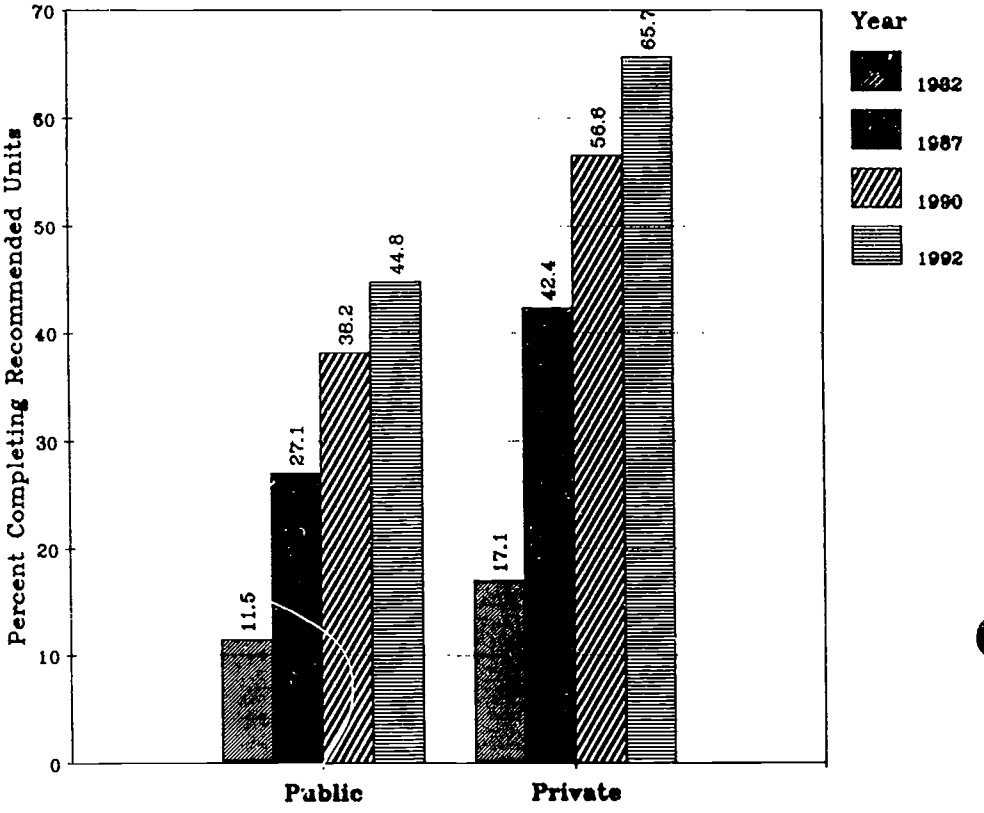
These data are particularly important because public high school graduates were nearly 90 percent of all high school graduates in 1992.

The difference between private and public high school graduate core unit completion increased between every survey year. Between 1982 and 1987, the proportion of private high school graduates completing the four core units increased by 25.3 percentage points compared to an increase of 15.6 percent in public high schools. Between 1987 and 1992 the increase was 14.2 percentage points in private high schools compared to 11.1 points in public high schools. Between 1990 and 1992 the proportion of private high school graduates meeting this criteria increased by 9.1 percentage points, compared to 6.6 percentage points in public high schools.

The proportion of public high school graduates completing recommended units for the four core subjects plus the half-unit of computer science was 28.7 percent in 1992, compared to 36.0 percent for graduates from private high schools. By a substantial margin private high school graduates were less likely than public high school graduates to have taken the half-unit of computer science by graduation. However, between 1982 and 1992 private high school graduates made a substantially larger gain in this area than did public high school graduates.

The reverse pattern is true for the two-year foreign language recommendation. In 1992 private high school graduates were more likely than public high school graduates to have completed two units of a foreign language.

Core Curriculum Course Completion
for Public and Private High School Graduates
1982, 1987, 1990 and 1992



Other Characteristics

In 1992 45.3 percent of high school graduates whose parents had not finished high school managed to complete the English, science, social studies and mathematics core units. This compared to 47.2 percent of those whose parents were high school graduates, 45.7 percent of those whose parents had some college, and 48.5 percent of those whose parents were college graduates.

More interestingly, between 1982 and 1992, the largest increases in the core curriculum completion rates were among high school graduates whose parents had the least amount of education. Among graduates whose parents had not graduated from high school, the increase between 1982 and 1992 was 35.3 percentage points, compared to an increase of 29.0 percent among those whose parents were college graduates.

High school graduates from urban high schools were more likely than graduates from suburban or rural high schools to have taken the recommended units in English, science, social studies and mathematics. In 1992 50.8 percent of urban high school graduates completed the recommended units, compared to 47.6 percent from suburban high schools and 42.5 percent of those from rural high schools. Moreover, between 1982 and 1992 the greatest gains were in urban high schools, and smallest gains were in rural high schools.

More Tuition . . . *. . . for Less Instruction*

Changing Revenue and Expenditure Patterns in Public Higher Education, FY1980 to FY1993

Since 1980 public higher education has undergone a profound financial transformation.

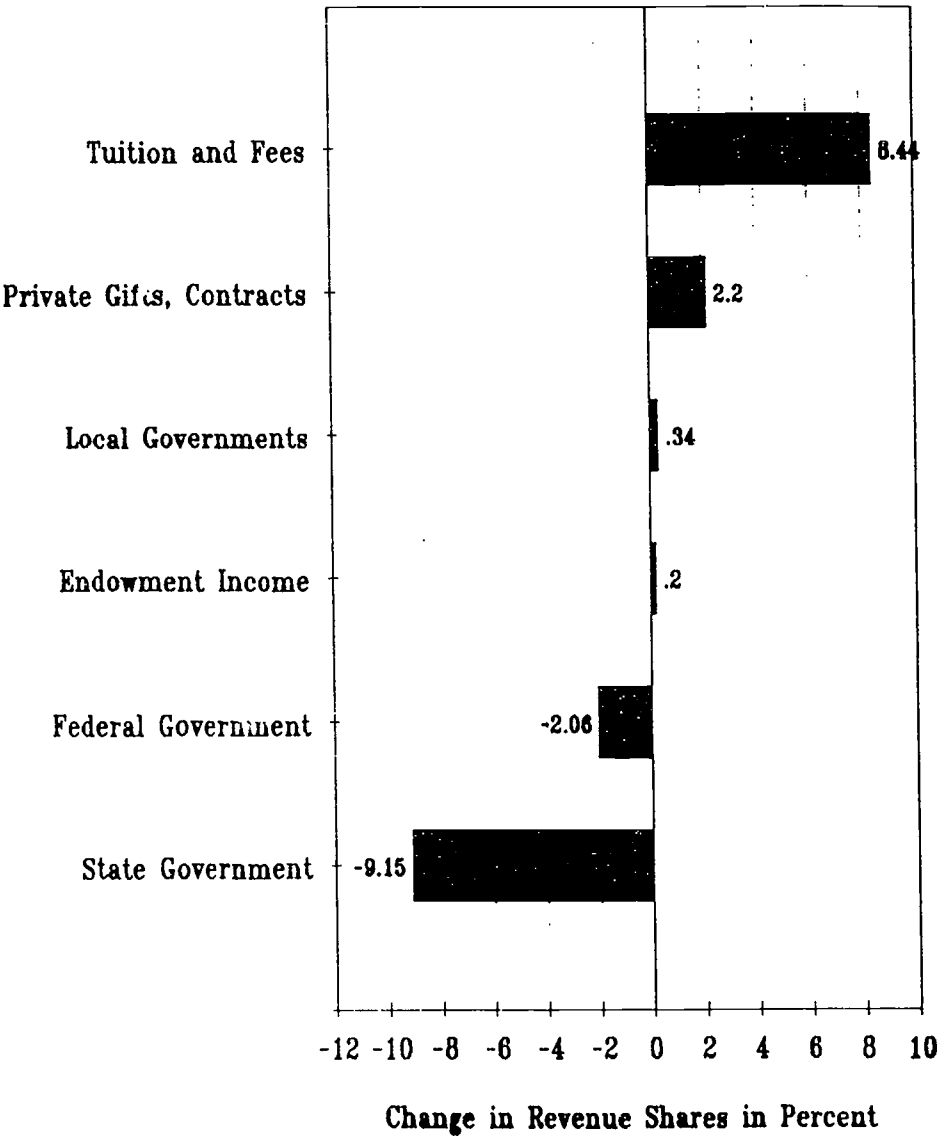
- *Public colleges and universities are increasingly relying on revenues from tuition and fee charges to students and private sources for educational and general revenues, and receiving declining shares of E&G revenues from state and federal governments.*
- *These public colleges and universities are spending a declining share of these revenues on instruction and physical plant operations and maintenance, and increasing shares on research and student financial aid.*

In short, in FY1993 students enrolled in public colleges and universities are paying more tuition for less instruction than they did in FY1980.

In this analysis we examine very recently released data on the revenues and expenditures of higher education for the 1993 fiscal year. These data were provided by the National Center for Education Statistics.

We have compared these data to those previously published for FY1980. Our central concern is how these changes affect opportunity for higher education for students. We have chosen FY1980 as the base year for comparison because data are available for that year and because the refinancing of higher education at the federal level and in all 50 states began about 1979. All data sources on higher education financing indicate that since about 1979 or 1980, social resources committed to higher education have been reduced, and private resources committed to higher education have increased.

Changes in Revenue Shares in Public Higher Education Between FY1980 and FY1993



In this analysis we examine public higher education only. Our analysis included revenue and expenditure data for private higher education. The results were interesting, but space limitations precluded its inclusion in this issue of OPPORTUNITY.

The Data

The federal government has collected and reported statistics on education in the United States since the end of the Civil War. We have examined financial data on higher education

published since 1931.

The current data is collected in annual surveys through the Integrated Postsecondary Education Data System (IPEDS). Here we use the Finance Survey portion of IPEDS. The data for 1993 will be published by the National Center for Education Statistics in periodic *Ed Tabs* reports and the annual *Digest of Education Statistics*.

The IPEDS Finance Survey collects information from higher education institutions on revenues by source and expenditures by function. Our analysis of these data is limited to the largest category, Education and General Expenditures. This includes the categories noted in the charts, and excludes mainly auxiliary enterprises such as hospitals, dormitories, food service, college stores and intercollegiate athletics.

Revenues

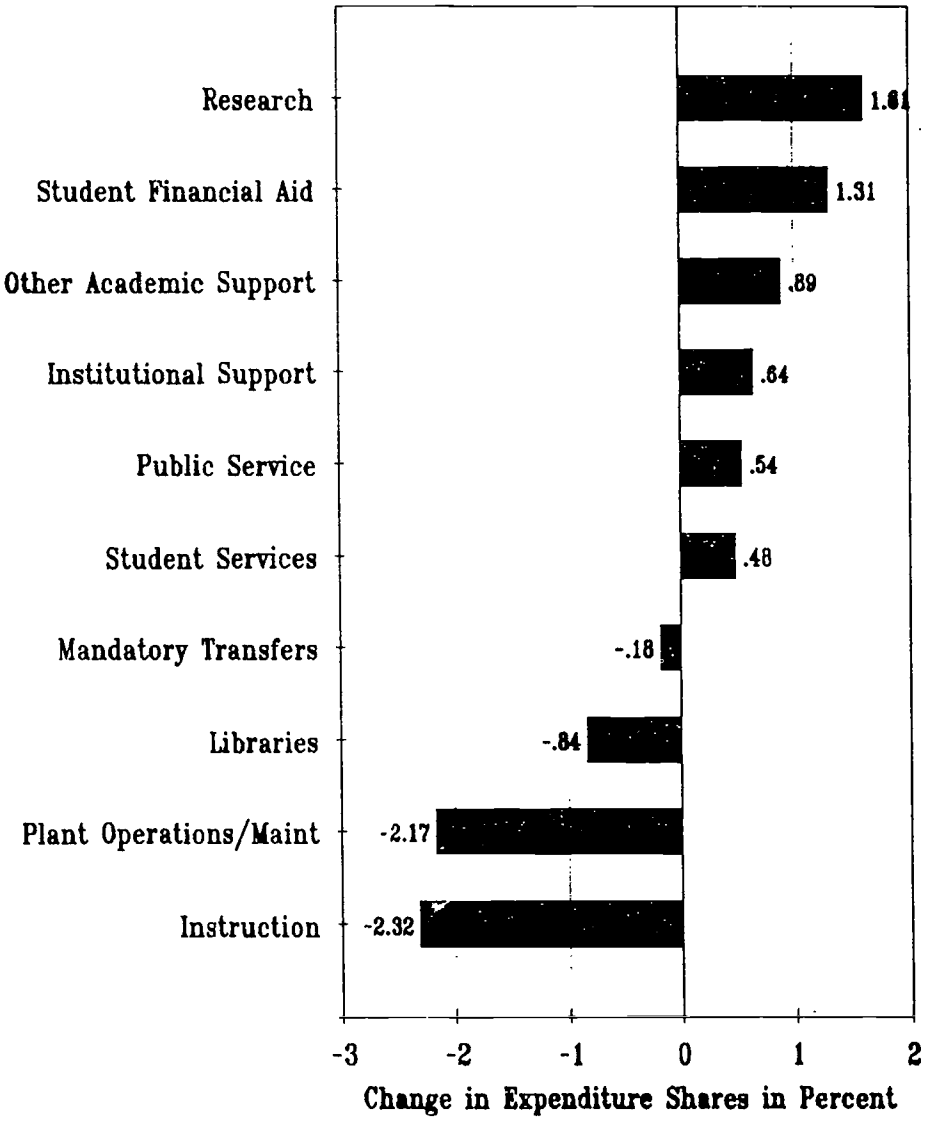
In FY1993, public colleges and universities in the United States received $79.974 billion in educational and general revenue. The distribution of these funding sources in FY1993 was as follows:

Tuition and fees	24.37%
Federal government	14.57%
State governments	49.75%
Local governments	5.05%
Private gifts, contracts	5.41%
Endowment income	0.83%

(Note that this excludes income from essentially self-supporting auxiliary enterprises and services. Apparently, about $3 billion in revenue from auxiliary enterprises and services was spent on educational and general functions in FY1993.) In FY980 public higher education received $30.514 billion from these sources.

Between FY1980 and FY1993, this distribution shifted, as shown in the chart on the previous page. Public colleges and universities grew more dependent on revenues primarily from tuition and fee charges to students, and secondarily from private sources in the form of gifts, grants and contracts. Public institutions grew less dependent on their state and the federal government during this period.

Changes in Expenditure Shares in Public Higher Education Between FY1980 and FY1993



Expenditures

In FY1993 public colleges and universities spent $83.211 billion on educational and general functions, up from $30.627 billion in FY1980. The distribution of these expenditures for educational and general functions in FY1993 was as follows:

Instruction	41.17%
Research	12.74%
Public service	5.48%
Libraries	2.80%
Other academic support	6.35%
Student services	6.21%
Institutional support	10.88%
Physical plant operations/maint	8.50%
Student financial aid	4.48%
Mandatory transfers	1.37%

(Again, this excludes expenditures for auxiliary enterprises.)

Between FY1980 and FY1983, available funds were redistributed across these functional categories as shown on the chart on the previous page. In public universities and colleges, research and student financial aid were the largest gainers in shares of E&G expenditures. These were followed by institutional support, public service and student services.

The largest losers in shares of public institutional E&G expenditures were instruction and physical plant operations and maintenance between FY1980 and FY1993. Libraries also lost E&G expenditure share during this period.

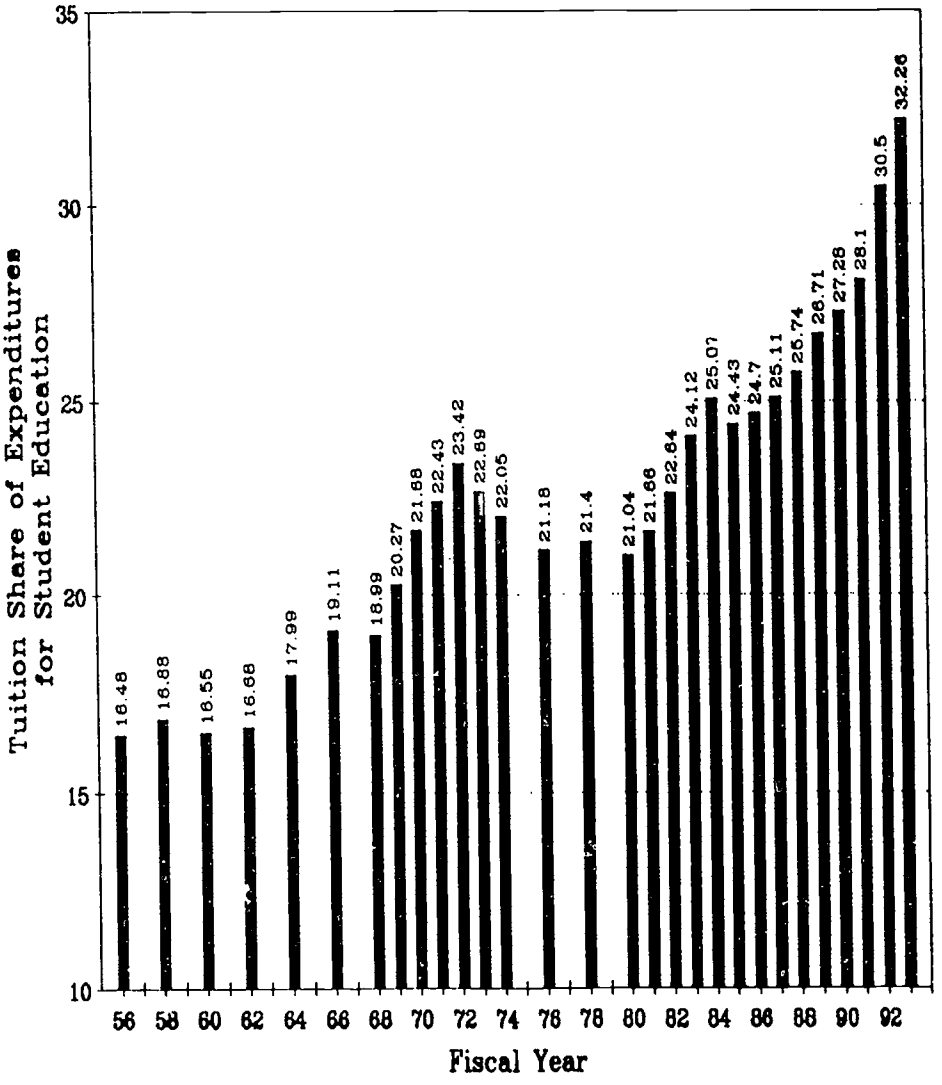
Reliance on Tuition Revenues

From these data one may fairly deduce that tuitions paid by students are covering a larger share of the costs of their education. That education includes more than instruction. It includes institutionally funded student financial aid, student support services, and portions of institutional expenditures for libraries, academic and institutional support, and plant operations and maintenance.

We have calculated the portion of the expenditures of public colleges and universities fairly attributed to the costs of educating students. The plot of the result is shown to the right.

Costs of educating students in public institutions *do not* include research or public service. The *do* include instruction, student support services and student financial aid. They *also* include a portion of the expenditures for libraries, other academic support, institutional support, physical plant operations and maintenance and mandatory transfers. That portion is the ratio of expenditures for instruction to the sum of the expenditures for instruction plus research plus public service.

Tuition Share of Expenditures for Student Education in Public Higher Education Institutions Fiscal Years 1956 to 1993



Between the mid 1950s and early 1960s, tuition and fees revenues paid between 16 and 17 percent of these costs of educating students in public colleges and universities. This proportion increased--unevenly--to 21 percent by 1980. After 1980 the cost shift from state taxpayers to public institution students took off. By 1993 tuition and fee revenues had increased to 32.26 percent of our broader measure of educational costs.

Our analysis of tuition growth in public higher education for FY1994 and FY1995 indicates that subsequent IPEDS financial surveys will report further growth in the proportion of educational costs financed by tuition and fee revenues charged students. Moreover, the low budget priority being accorded public higher education in state budgeting currently suggests

that states will continue to cut back in state funding of higher education and tuitions charged students will be increased to offset this loss of state support.

Conclusions

This brief analysis of public higher education revenues and expenditures identifies major and minor issues that impact higher educational opportunity.

First, public higher education finance is changing. Sources of revenues are changing, and the purposes to which revenues are put are changing. These changes are not trivial and they do not appear to be temporary. Other data sets confirm them. They have a profound effect on the affordability and quality of higher educational opportunity for students.

The changing revenue picture documents the cost shift from taxpayers to students. Social resources (of the states and federal governments) previously committed to higher education are being diverted to other pressing social priorities. Tuition charges to students have been increased to offset this loss of taxpayer support.

Also, public institutions appear to be assessing self-supporting auxiliary services charges that help finance educational and general functions of institutions. This revenue capture from auxiliary enterprises has grown from about $113 million in FY1980 to $3,237 million by FY1993.

Ever so gradually but ever so persistently, public higher education is being privatized.

The changing expenditure patterns in public colleges and universities indicate a substantial de-emphasis on instruction, and probable deferral of physical plant maintenance and operating cost reduction. Of greater budget priority are research, student financial aid and various support roles--academic, institutional and student.

From the perspective of the tuition-paying student, students are paying more tuition for less instruction in 1993 than they were in 1980 in public colleges and universities. The increased tuition and fee share of E&G revenues indicates that by FY1993 students were paying $6.8 billion more than they were in FY1980. However, public colleges and universities had decreased expenditures on instruction by $1.9 billion during this period.

Finally, regarding affordability, while tuition revenues increased by $6.8 billion between FY1980 and FY1993, public institutions only covered about $1.1 billion of this increase for students with need from institutional resources. To do this much is progress for public institutions wedded to low tuition. However, it probably fell several billion dollars short of the needs of their students.

Postsecondary Education
OPPORTUNITY

The Mortenson Research Letter on Public Policy Analysis of Opportunity for Postsecondary Education

Number 38 | Iowa City, Iowa | August 1995

The Growing Importance of Financial Considerations in College Choice 1980 to 1994

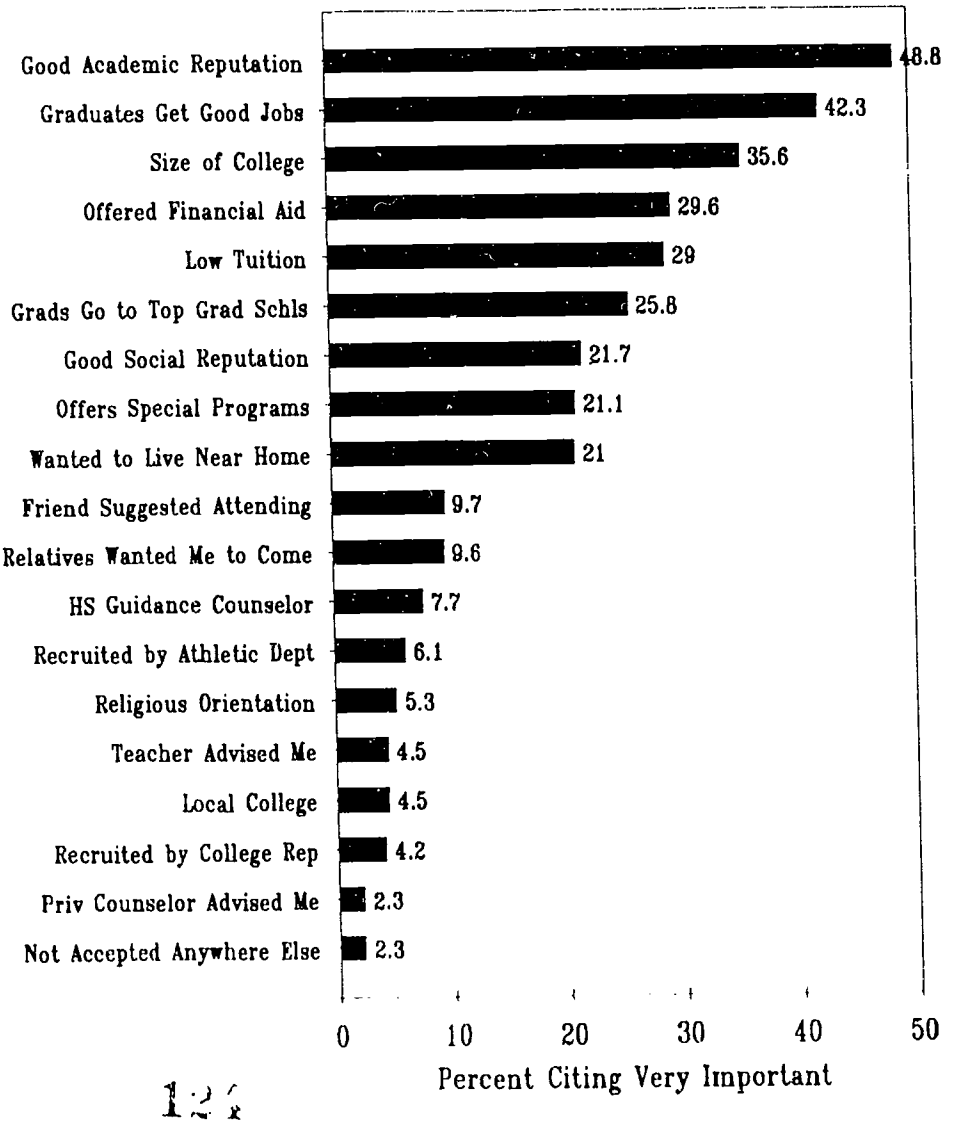
The higher education cost shift from taxpayers to students that has been underway at the federal level and in all 50 states since 1980 influences all college enrollment decisions of students: access, choice and persistence. Students that are affected by cost considerations in these enrollment decisions come from lower levels of family income. Those from the highest levels of family income are least affected by this cost shift.

Here we examine data on college choice with respect to the role of financial resources to finance college attendance costs. *A priori* we would expect students from lower income family backgrounds to be more sensitive to cost factors in college choice than we would expect of students from higher family income backgrounds.

In past issues of OPPORTUNITY (e.g., October 1993) we have reported the analyses of these data from the perspective of economic stratification of higher education enrollments according to family income. Of course we expected to find and did find that:

- Median family income is highest in the most academically selective institutions.
- Median family income is highest in universities (public or private), lower in four-year colleges (public or private), still lower in two-year colleges (public or private) and

Reasons Cited as Very Important in Selecting Freshman College 1994



lowest in predominantly black colleges (public or private).

The prescient *Chicago Study of Access and Choice in Higher Education* (1984) of educational opportunity in Chicago and its suburbs concluded:

> *The [Chicago] study shows an interlocking system of educational stratification that treats minority and low-income students differently in a great many ways. The higher education system does not operate to equalize opportunity but has powerful institutional features that tend to perpetuate separation and inequality. There are no signs that these problems are curing themselves. In fact, cuts in scholarships, increases in tuition, increases in high school graduation standards and college admissions requirements, and cuts in compensatory programs in both high schools and colleges could lead to greater inequality and less access for a large and growing fraction of metropolitan Chicago students.*

As predicted, things have gotten worse--much worse--in ways that the Orfield study group correctly anticipated.

Here we examine published and unpublished data from the ACE/UCLA *Freshman Survey* to glean additional insights into the growing importance of financial factors in the college choice decisions of students. What we find are:

- As the costs of higher education have been shifted from taxpayers to students since 1980, the proportion of college freshmen citing financial factors as very important in their college choice has increased, sharply.
- To some degree, these growing financial considerations in college choice appear to be displacing considerations of academic reputation and preparation for good jobs that have dominated college choice considerations in the past.
- Between 1989 and 1994, the greatest growth in the importance of a financial aid offer in the college choice decision was for freshmen from families with parental incomes above $80,000 per year.

College choice appears to be less influenced by academic considerations and more be affordability concerns than was the case before the cost shift from taxpayers to students began in 1980.

The Data

Data used in this analysis come from the annual survey of American college freshmen conducted by the American Council on Education and the Higher Education Research Institute at UCLA. This survey has been conducted each year since 1966 and presents a rich source of insight into many critical public policy questions regarding higher educational opportunity.

Astin, A. W., Korn, W. S., Sax, L. J., and Mahoney, K. M. (1994). *The American Freshman: National Norms for Fall 1994.* Los Angeles: Higher Education Research Institute, UCLA.

We are also grateful to Bill Korn and Eric Dey for special cross-tabulations from the 1989 and 1994 survey files. Our special tabs went beyond published data and detailed the survey data by estimated parental income.

The specific question that provides college choice insight in the freshman survey is:

> *Below are some reasons that might have influenced your decision to attend this particular college. How important was each reason in your decision to come here?*

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Mission Statement

This research letter is founded on two fundamental beliefs. First, sound public social policy requires accurate, current, independent, and focused information on the human condition. Second, education is essential to the development of human potential and resources for both private and public benefit. Therefore, the purpose of this research letter is to inform those who formulate, fund, and administer public policy and programs about the condition of and influences that affect postsecondary education opportunity for all Americans.

Relatives wanted me to come here
My teacher advised me
This college has a very good academic reputation
This college has a good reputation for its social activities
I was offered financial assistance
This college offers special educational programs
This college has low tuition
High school counselor advised me
Priv college counselor advised me
I wanted to live near home
A friend suggested attending
A college rep recruited me
Athletic department recruited me
This college's graduates gain admission to top graduate/ professional schools
College's graduates get good jobs
I was attracted by the religious affiliation of the college
I wanted to go to a school about the size of this college
Not accepted anywhere else
Local college; no other options

Three choices were provided for each reason: very important, somewhat important and not important. Our analyses are limited to those who cited very important to their college choice decision.

Reasons for College Choice

Freshmen report that they continue their educations after high school primarily for economic and general education reasons. They make their choice among colleges for similar reasons.

As shown in the first chart, more college freshmen report that the academic reputation of their college was very important to their choice decision than any other reason. This was followed by "graduates get good jobs."

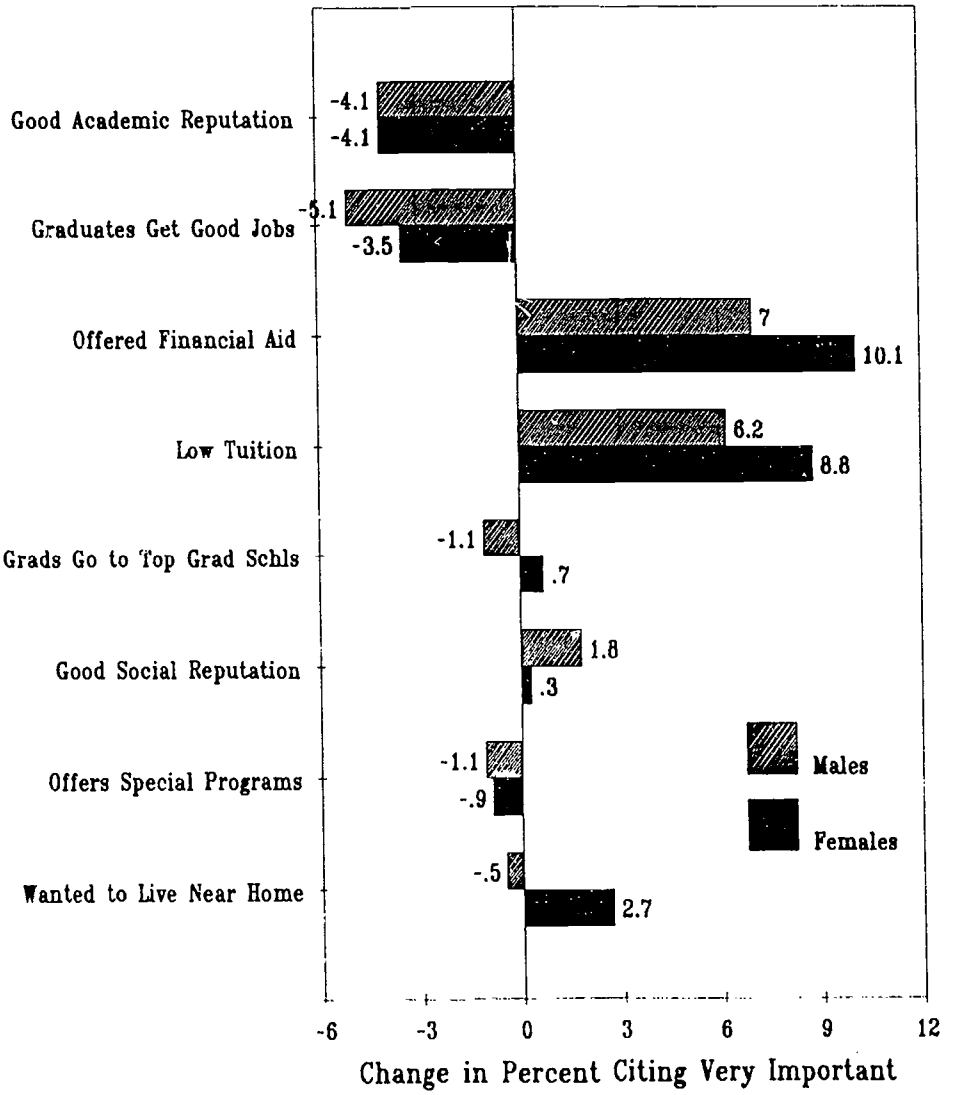
This analysis approaches the freshman survey data from the perspective of college affordability. How does price affect college choice? What about net price (after financial aid is factored in)? Thus, we look for the responses that offer insight into these effects.

The responses that provide this information include those concerning low tuition, financial aid offers and ability to live cheaply while attending college.

The survey also includes responses that indicate students are interested in general educational benefits (academic reputation, availability of special programs, preparation for graduate school), campus environmental factors (size of college, social reputation, religious orientation), and are directed toward the college from many sources (friends, relatives, high school guidance counselors, etc.).

In the 1994 Freshman Survey, mo

Change in Reasons Cited as Very Important in Selecting Freshman College for Males and Females Between 1983 and 1994



freshmen report that the academic reputation of the college they have chosen is very important than any other response alternative. This has been a consistent finding since they survey first started asking about reasons for college choice in 1971.

Graduates get good jobs has been the second most frequently cited very important reason for choosing the college of enrollment since this question was added in 1984.

The cost considerations--offer of aid and low tuition--were cited by about 29 percent of all freshmen as very important to their college choice decision.

Change in Reasons for Choice

The great cost shift from federal and state taxpayers to students began in 1980 and continues today. Therefore, we compare current reasons for choosing the freshman college to those some years back. Here we choose 1983 because of changes in the design of the college choice question on the Freshman Survey that were implemented that year.

Between 1983 and 1994 the importance of financial factors in college choice increased, while the importance of academic reputation and job placement of graduates decreased. This was true for both men and women, but somewhat more so for women.

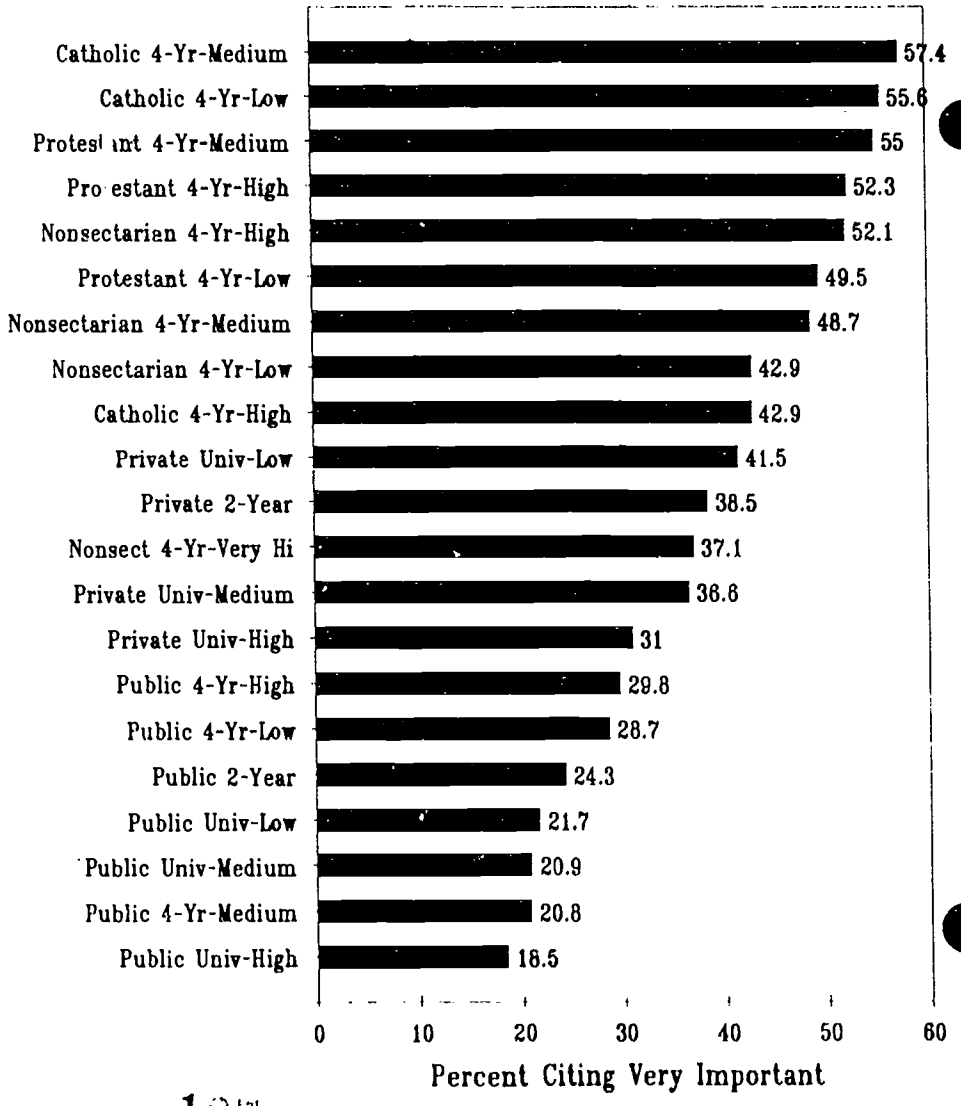
The proportion of freshmen reporting that the offer of financial aid was very important to their institutional choice decision increased by 7 percent for men and 10 percent for women. The proportion of freshmen indicated that low tuition was important to their choice decision increased by 6 percent for men and nearly 9 percent for women between 1983 and 1994. Indeed, it appears that the growth in financial influences on the college choice decision is displacing academic reputation and job placement among a growing proportion of freshmen.

Importance of Financial Aid Offer

The importance of a financial aid offer in the college choice decision is clearly more important to freshmen entering private institutions than it is to students entering public institutions. The 1994 Freshman Survey data show that an offer of financial aid is very important to freshmen entering low and medium selectivity Catholic four year colleges about three times more often than among freshmen entering public universities that are highly selective.

Between 1983 and 1994, the importance of a financial aid offer to the college chosen increased in all types of higher education institutions except public universities with medium selectivity criteria. Growth was greatest in Catholic 4-year colleges with medium selectivity, and

Importance of Offer of Financial Assistance in College Choice by Institutional Control, Type and Selectivity 1994



nonsectarian 4-year colleges that were highly selective in admissions. (Chart available on request.)

A broader picture of the growth in the importance of financial factors in college choice is shown in the chart to the right.

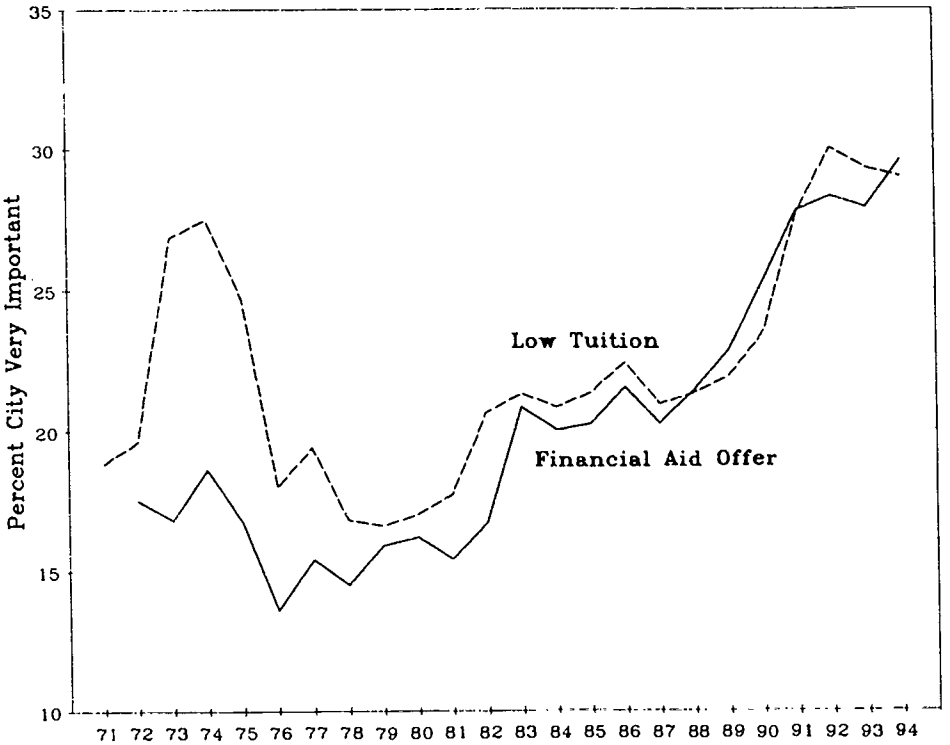
Between 1980 and 1994, the proportion of college freshmen reporting that the offer of student financial assistance was very important to their college choice decision increased from 16.2 to 29.6 percent. Similarly, the proportion of all freshmen reporting that low tuition was very important in their college choice decision increased from 17.0 to 29.0 percent during this period. During this period, the proportion of college freshmen reporting that they had enrolled in their first choice college or university declined from 75.8 to 69.9 percent in 1993 and 72.4 percent in 1994.

With the assistance of Bill Korn at UCLA, we have examined special tabulations of these financial factors in the college choice decisions of fall 1994 college freshmen. Specifically, we have examined data on college choice influences across levels of estimated parental income. The results are shown in the chart on the following page.

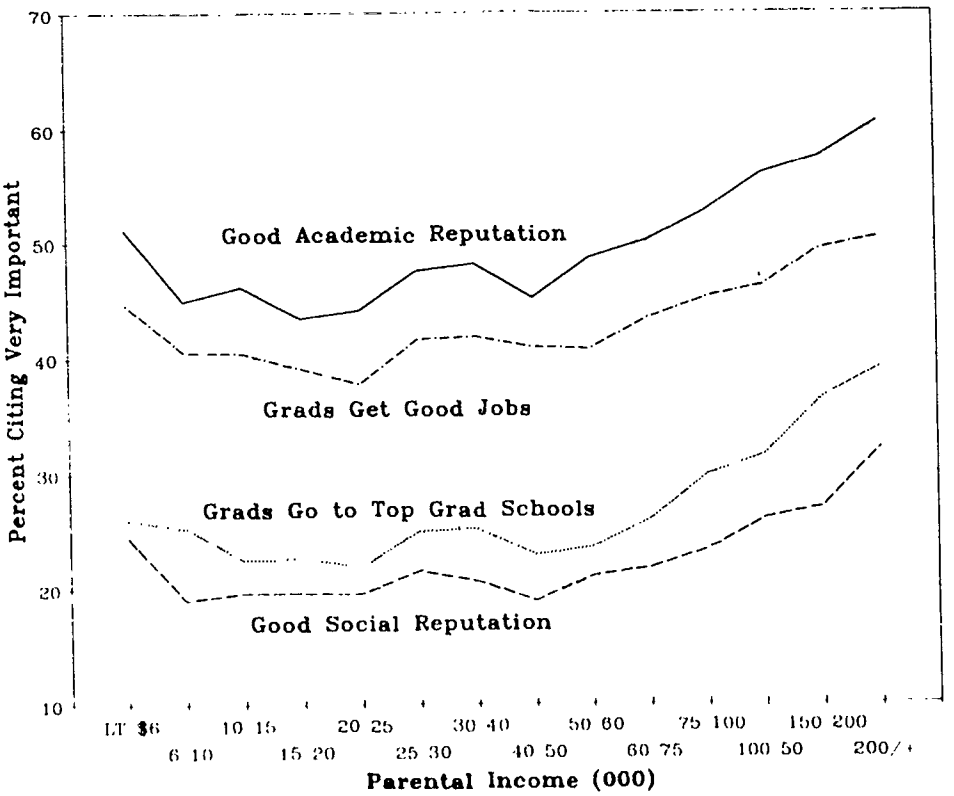
For example, the offer of financial aid was very important in their college choice decision to 52.3 percent of the freshmen from families with incomes of less than $6000 per year, but only 8.6 percent of the freshmen from families with incomes of greater than $200,000 per year.

Similarly, low tuition was a very important choice consideration to 34.6 percent of those whose parents made less than $6000 per year, and 10.8 percent of those whose parents earned more than $200,000 per year. Being

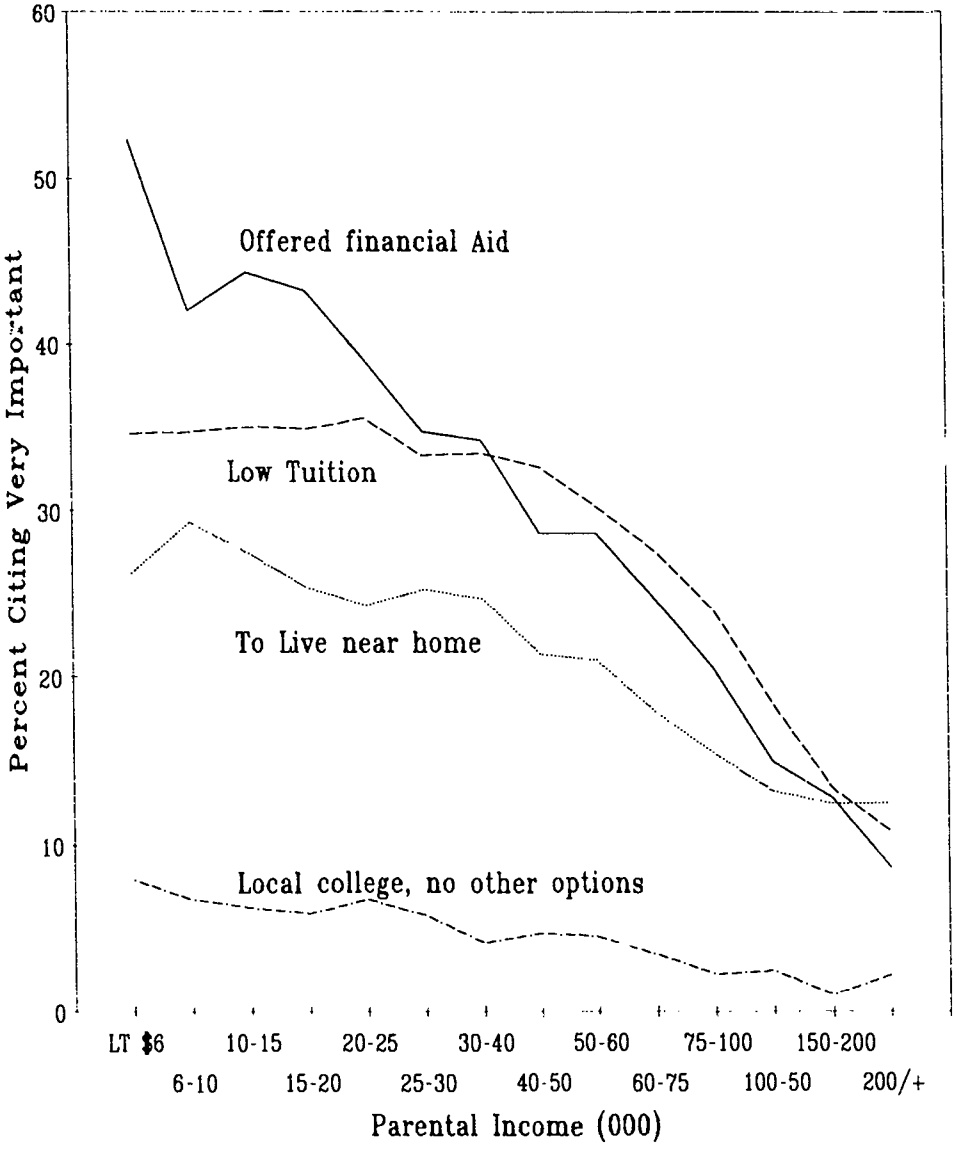
Financial Reasons Cited as Very Important in Selecting Freshman College 1971 to 1994



Reputation Factors Cited as Very Important in College Choice by Parental Income, 1994



Financial Factors Cited as Very Important in College Choice by Parental Income, 1994



able to live near home was very important to 26.2 percent of those whose parents made less than $6000 per year, and 12.4 percent of those whose parents earned over $200,000. Attending a local college because there were no other options was a very important choice factor for 7.9 percent of those whose parents earned less than $6000 per year, and to 2.2 percent of those whose parents earned over $200,000.

In each case, financial considerations diminished in importance as parental incomes increased among 1994 college freshmen. These considerations were generally highest among those from lowest family incomes, and lowest among those from highest family incomes. The importance of these financial factors appears to drop off more sharply above parental come levels of about $50,000 per y .

A very different pattern to the data emerges when we examine the effects of reputational factors on the college choice decision and control for reported parental income. These reputational factors include the institution's academic and social environmental reputation, and the outcome measures of job and graduate school placement following graduation.

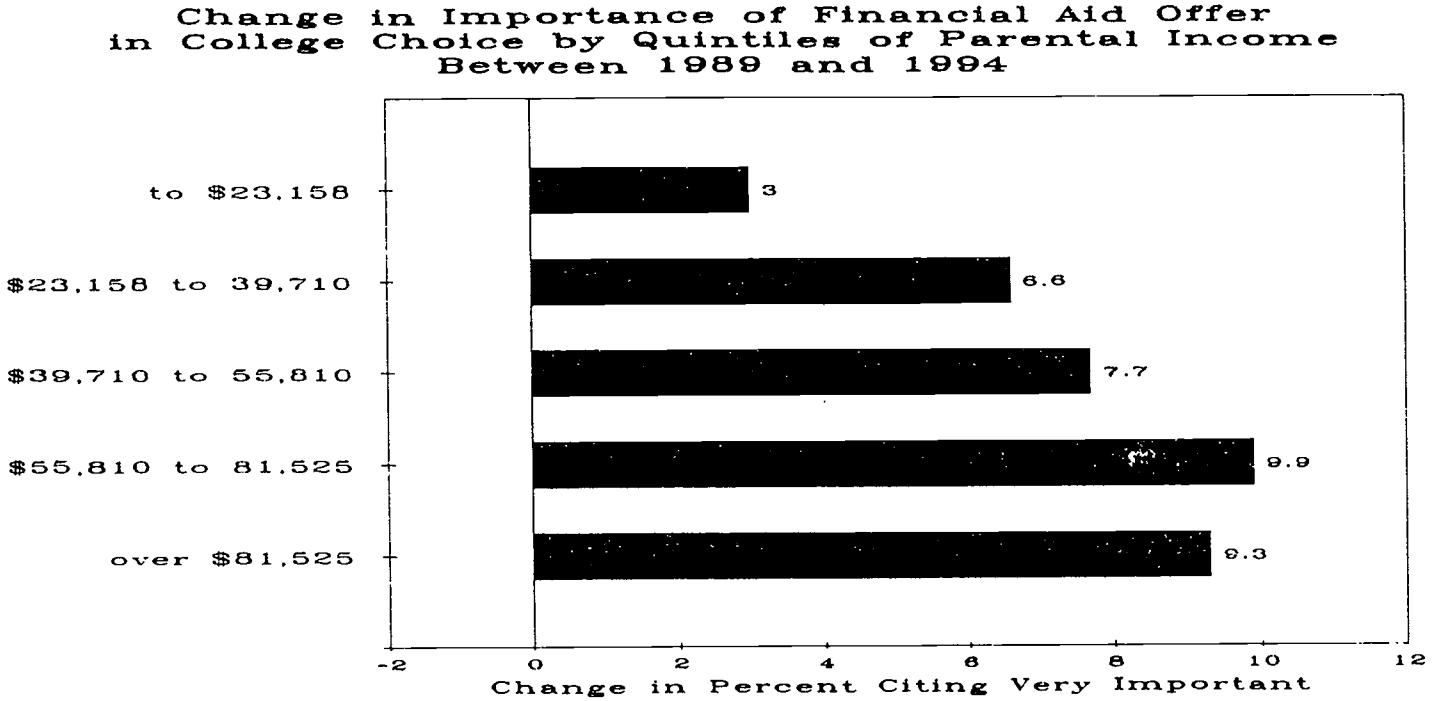
Generally, the importance of these reputational factors is constant across parental income levels from zero to about $60,000 per year, and increase with parental incomes beyond that level. Apparently, those least concerned about financing higher education are more concerned about reputational factors in college choice decisions.

Finally, we ask of the UCLA Freshman Survey data: For students from what family income levels has the importance of a financial aid offer increased in importance?

To examine this question, we have calculated response rates by quintiles of parental income from special tabulations from the Freshman Survey prepared for 1989 (by Eric Dey) and for 1994 (prepared by Bill Korn).

The difference between 1989 and 1994 in the proportion in each quintile citing the importance of an offer of financial assistance in their college choice decision is shown in the chart on the following page. This chart says volumes about the priorities of institutions--particularly private institutions--in marketing, admissions and financial aid in freshmen enrollment during the last five years.

- Between 1989 and 1994, the largest increase in the proportion of freshmen reporting that an offer of financial assistance was very important to their college choice decision occurred in the fourth quintile of parental income,



between $55,800 and $81,500.

- The second largest increase during the last five years occurred to freshmen from the top quintile of family income, over $81,500.
- The smallest increase--less than half that of any other quintile--occurred in the bottom quintile, where parental income was below $23,200 per year.

One cannot escape the conclusion that the growth in financial aid award offers between 1989 and 1994 was targeted on the most affluent and probably least needy students in the freshman class.

Summary and Conclusions

This analysis of the Freshman Survey data from UCLA document the changing set of influences of the college choice decision since 1980. Among the more obvious and significant findings from this analysis are the following:

- Students enroll in college, and choose among colleges, primarily for economic and general educational reasons.
- When it comes to choice among colleges, freshmen are interested in the reputation of the college for environmental factors (academic and social) and outcomes (job and graduate school placement).
- Between 1983 and 1994, the importance of an institution's academic reputation and job placement record diminished for both men and women freshmen.
- Between 1983 and 1994, the importance of financial factors increased in importance in the college choice decision for both men and women.
- Between 1971 and 1980 the importance of financial factors in the college choice decision declined. This has reversed, with a vengeance, and since 1980 the importance of a financial aid offer from the institution and low tuition charges has greatly increased. Much of this increase occurred between 1987 and 1992.
- Students from lowest parental income families are most likely to cite the importance of financial considerations in their college choice decision. Students from the highest levels of parental income are least concerned about financial considerations in college choice.
- Freshmen from higher levels of family income tend to be more interested in reputational factors in college choice than are students from middle and lower income family backgrounds.
- Between 1989 and 1994, the greatest increase in the importance of financial aid offers was reported by students from the top two quintiles of parental income, above about $81,500 per year. The smallest increase was reported by freshmen from the bottom quintile of parental income.

These data make clear that institutional offers of student financial aid are increasingly important to freshmen in deciding which college to attend. However, institutions--particularly private institutions--appear to be making these offers not to students from the lowest parental income levels that are most concerned about affordability issues, but to students from the highest levels of parental income who are least concerned.

Need Analysis: Does It Still Work?

During May 1995 the National Association of Student Financial Aid Administrators held six regional forums titled "Need Analysis: Does It Still Work?" to gather comments on the current state of need analysis. This summary identifies the themes and conclusions of discussions by participants and panelists.

This is a report to the NASFAA membership on the Regional Forums on "Need Analysis: Does It Still Work?" held in each of the six membership regions in May 1995.

The Forum discussions revealed a rich diversity of opinions on need analysis in the financial aid profession today. They also disclosed widespread agreement among aid administrators on some basic principles of need analysis and its methodologies. The participants strongly affirmed the principles that: (1) parents and students are primarily responsible for meeting college costs; (2) need analysis systems should result in vertical and horizontal equity for aid applicants; (3) need analysis should not attempt to measure willingness to pay, it should assess ability to pay; (4) computations of Expected Parental Contributions should be independent of college costs and the financial aid available to meet those costs; and, (5) the results of need analysis should be considered as only benchmarks in assessments of financial need with the final evaluations being left to the professional judgment of financial aid administrators.

The participants believe that the federal government's attempts toward simplification of the financial aid application process, along with the Federal Methodology that accompanies it, have resulted in serious inequities in the treatment of applicants. They think that using the Simple Needs Test and the Automatic Zero EFC, without benefit of family asset data, leads to inequities in calculating EFCs. They believe that the Federal Methodology only assesses program eligibility, not the ability to pay for college, and that equity has been sacrificed to efficiency, consistency, and simplicity in handling applications for financial aid.

They generally agreed that having a good single need analysis methodology is an important goal. But establishing a single methodology is a hard goal to achieve, because of Congressional control of the Federal Methodology--and because there are so many demands on aid administrators to use need analysis to achieve institutional goals.

Participants said the profession needs to distinguish between methodologies designed to *establish eligibility for assistance and ration limited funds* and those designed *to establish a standard of ability to pay* and then use these distinctions in discussions of "need analysis" reform. In the Forum discussions, these two matters were sometimes confused, or treated as identical phenomena.

Participants agreed that more information about how need analysis works is needed by high school guidance counselors and family financial advisors, so they can help parents and students to better plan to save and meet college costs. The participants said that financial aid administrators need more information and training on economic theories underlying need analysis so they will know more about how and why modifications to a methodology produce certain effects. Better understanding of the theories will help aid administrators to better cooperate to improve the methodologies.

Participants also said that aid administrators needed to know more about the role of *valid* students budgets in need analysis, and how to construct them.

Participants agreed that need analysis should encourage, or at least not *discourage*, saving for college costs. They suggested that putting an Education Savings Protection Allowance in the formulas would help. Many participants saw the treatment of student earnings *as discouraging all work efforts*, especially for the single independent student with no dependents. Many aid administrators said they believe there should be a minimum self-help contribution for students, to reinforce the principle that all students should contribute something toward their education. However, they also said that adjustments to that "standard" should be made for contributions from dependent students from low-income families, whose earnings are often used to help support their families.

Participants were very dissatisfied with using Adjusted Gross Income as defined by the federal tax laws to determine applicant earnings under the FM. They agreed that resources in tuition prepayment plans should be treated as parent or student assets, rather than direct offsets to demonstrated need.

Consensus was less form in other areas. Participants held several different views on which parents in nontraditional families are responsible for the education of the dependent child and on how to assess ability to pay in those circumstances. The treatment of assets was discussed at length. Participants recognized that between two families with identical incomes the one that owns a home is better off than the one that is renting. However, they could not agree on satisfactory and equitable ways of assessing this wealth.

For a copy of the complete report, call the NASFAA at 202/785-0453.

Private wealth . . . *. . . Public poverty*

Tax Effort in the United States

Social investment requires social resources, or taxes extracted from citizens.

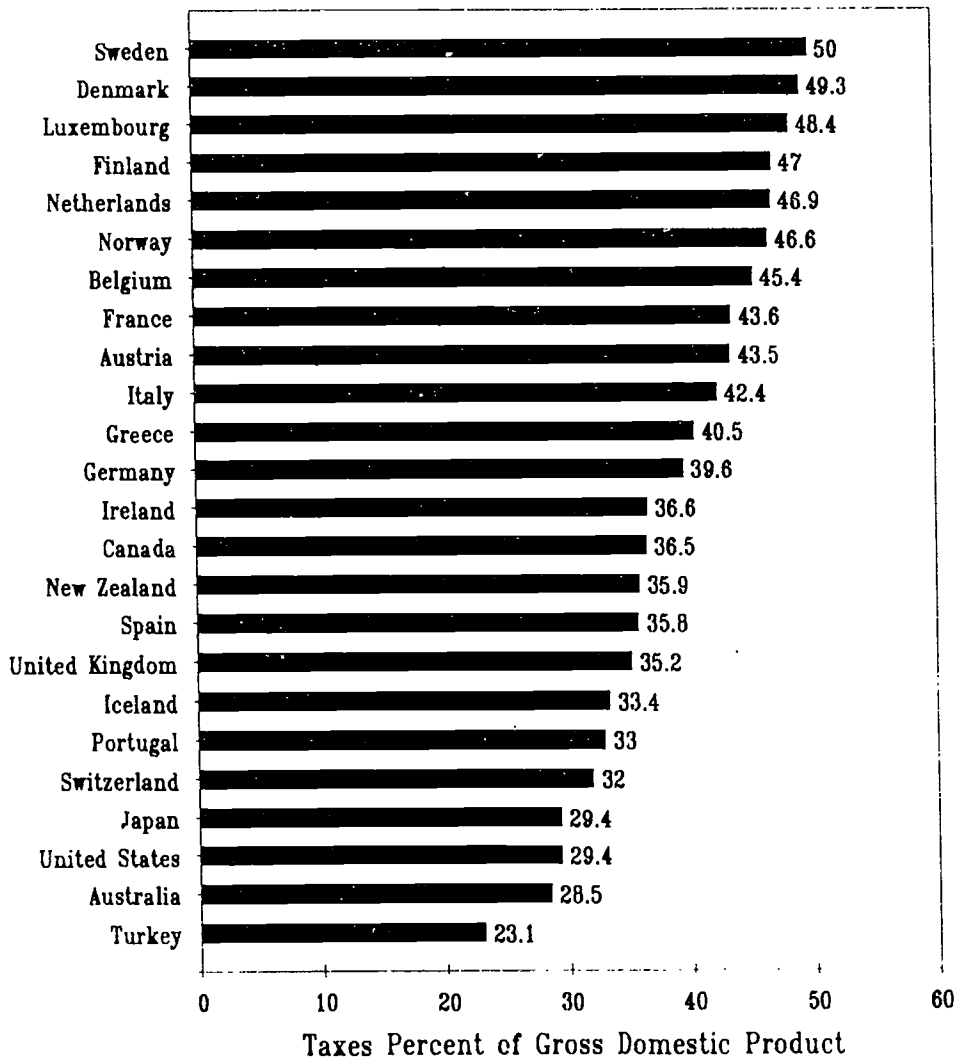
By almost any measure, the United States is the tax haven of the industrial world. Americans paid a smaller share of Gross Domestic Product to their federal, state and local governments than all but two of the twenty-four member countries of the Organization for Economic Cooperation and Development (OECD) in 1992.

Also, by almost any measure the United States faces substantially more serious domestic problems than any other industrialized country. These problems include crime, increasing incarceration, growing child poverty, widening income inequality, and declining real incomes and the lifestyles they support and choices they enable.

Against this background, the Congressional leadership elected in 1994 perceives an electoral mandate to reduce or eliminate social investments through programs that address these problems. In addition, Congressional leadership proposes to reduce taxes, particularly for the affluent, and to increase spending for defense. Among the many domestic programs slated for reduction or elimination by Congress are the federal investments in education, including the Department of Education, and many programs that make socially valuable investments in the neediest among us.

Here we look at the question of tax effort, or burden, depending on one's perspective, in the United States from international and time-series perspectives. These data portray a history of earnest governmental effort to control the bite of taxes in the United States.

Total Tax Revenue
as a Percent of Gross Domestic Product
1992



Source Organization for Economic Cooperation and Development (OECD)

Against the backdrop of perilous social and economic issues in the United States, and current Congressional efforts to control spending through reductions in socially productive investments, we look here at the role of taxes in the economy of the United States.

The Data

The international and time-series data on tax revenues and gross domestic product presented here were published by the Organization for Economic

Cooperation and Development (OECD), a Paris-based international organization created in 1960 to promote international economic development with a significant research-information mission.

Organisation for Economic Co-operation and Development. (1964.) *Revenue Statistics of OECD Member Countries, 1965-1993.* Paris, France.

Other data were prepared by the Bureau of Economic Analysis at the Department of Commerce. These data and a great deal more have been neatly consolidated by the Tax Foundation of Washington, D.C. (Their 1995 edition will be available in September.) Tax revenues include all levels of government in each country.

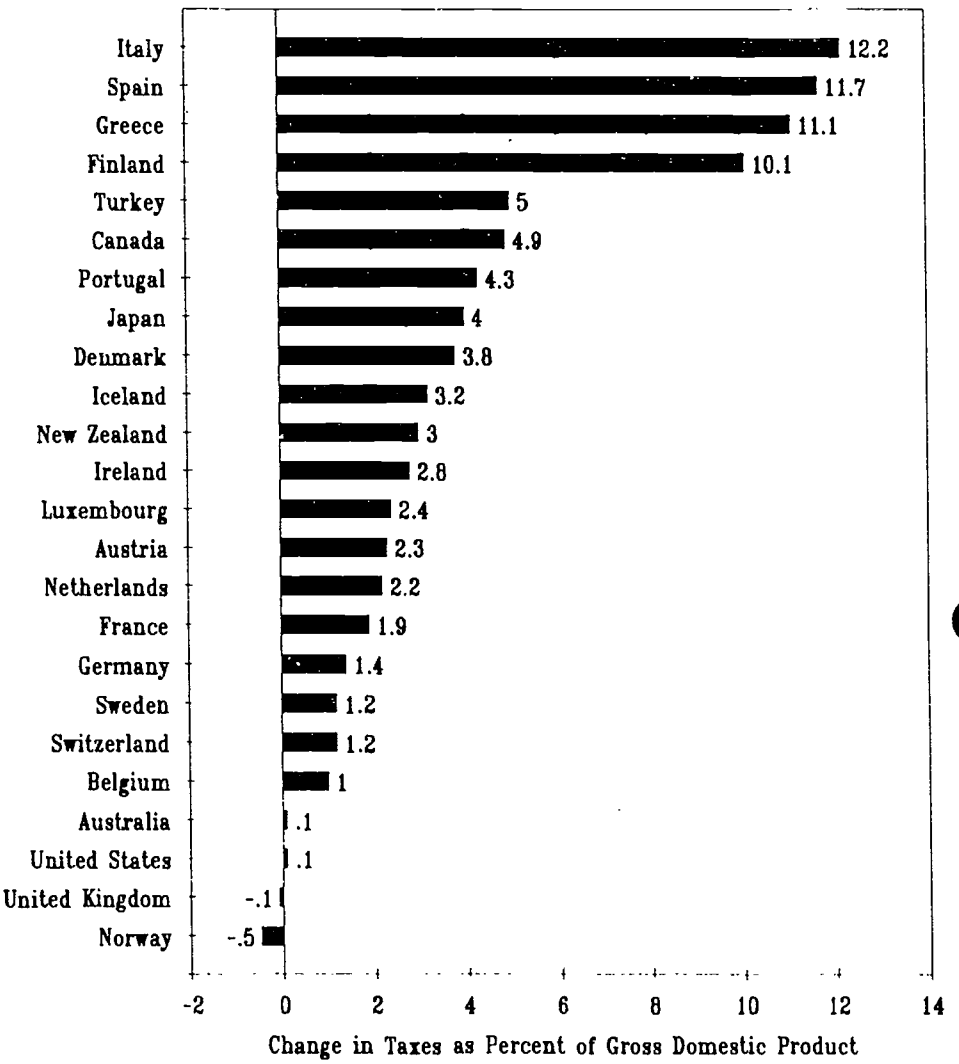
Edwards, C. R., ed. (1994.) *Facts and Figures on Government Finance, 1994 Edition.* Washington, D.C.: Tax Foundation.

International Comparisons

The first chart in this analysis summarizes total government tax receipts as a percentage of Gross Domestic Product (GDP) in the 24 member countries reported by the Organization for Economic Cooperation and Development (OECD). In 1992, the most recent data available (except as noted) indicated that in the United States total tax receipts were 29.4 percent of GDP. Among the 24 OECD countries, tax receipts ranged from 23.1 to 50.0 percent of GDP. The United States ranked 21st among the 24 OECD countries.

Between 1980 and 1992, the proportion of GDP going to government through tax receipts increased in 22 of the 24 OECD countries. Total tax receipts as a percent of GDP increased by from 0.1 to 12.2 percentage points in these 22 countries, with the largest increases occurring in Spain, Turkey, Greece, Italy and Portugal. Only in Norway and the United Kingdom did the tax bite drop, by 0.5 percent from 47.1 to 46.7 percent in Norway, and by 0.1 percent from 35.3 to 35.2 percent in the UK. In the United States, the tax share of GDP increased by 0.1 percent, from 29.3 to 29.4 percent.

Change in Total Tax Receipts as a Percent of Gross Domestic Product 1980 to 1992



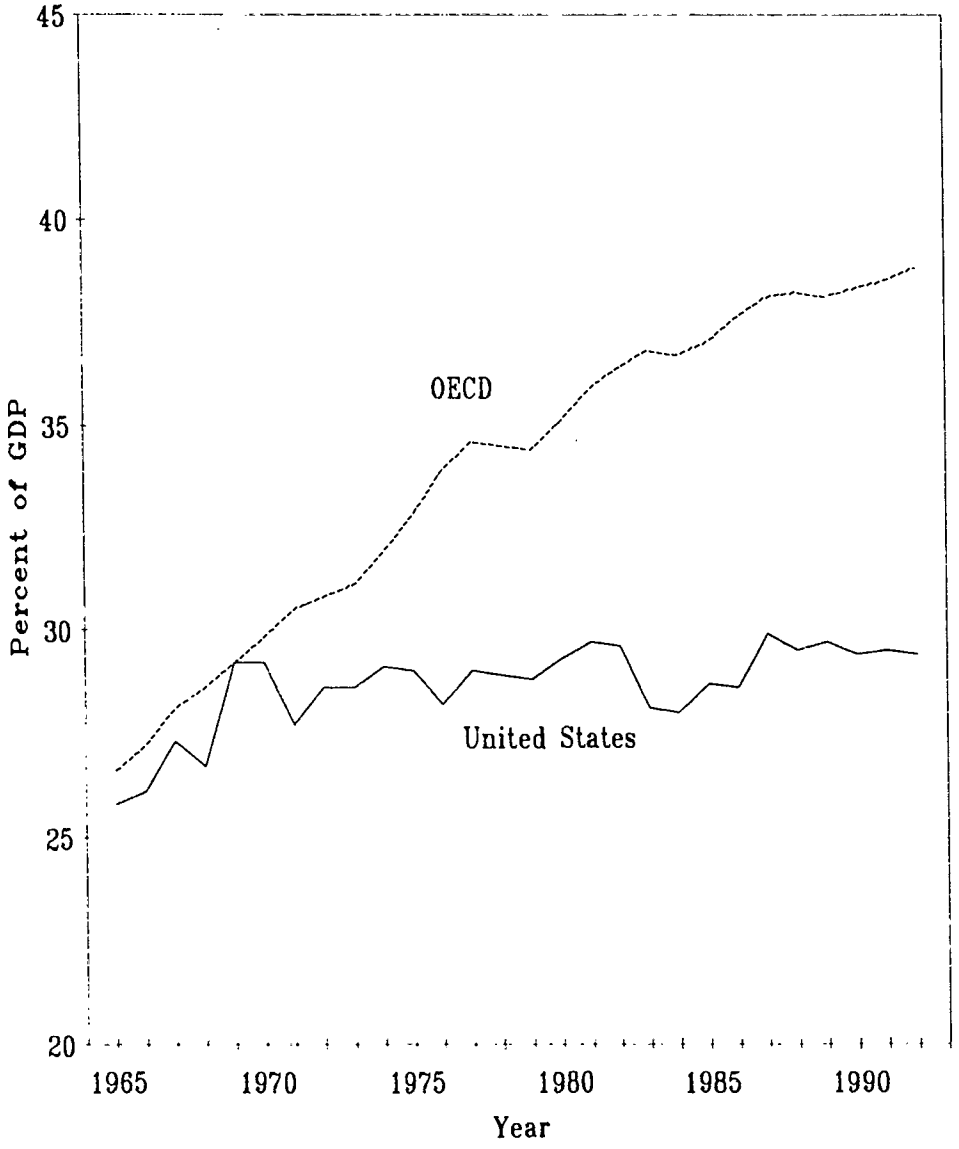
Source: Organization for Economic Cooperation and Development (OECD)

The OECD categorizes government tax revenues into five main areas. These taxes, and the proportions of total tax revenues provided by each in 1992 were as follows:

Income and profits	37.0%
Social security	25.0%
Payroll	0.9%
Goods and services	30.3%
Property	5.5%
Other	1.3%

The seven largest economies in the OECD are the United States, Japan, Germany, France, Italy, United

Total Tax Revenue as Percent of Gross Domestic Product 1965 to 1992



Kingdom, and Canada. Expressed as a proportion of GDP, taxes on corporate income ranks the United States fourth among these seven countries. The United States ranks fifth among the seven in taxes on personal income, social security, and property, and sixth among the seven in taxes on goods and services.

Trends in Tax Revenues in the United States

Government revenues include taxes, fees, utility revenue and insurance trust revenue. In 1991 taxes provided 55.0 percent of government revenue in the United States, down from 73.9 percent in 1960. As the share of government revenues from taxes has declined, the shares provided by non-tax general revenue and insurance trust revenue have increased significantly over the last three decades.

Looking at taxes alone, the major sources of tax revenue for government are individual income taxes (49.5 percent of all taxes), sales and customs (20.9 percent), property taxes (14.4 percent) and corporate income (10.4 percent). These taxes are particularly important for this analysis as they provide nearly all of the funds appropriated annually for the general activities and operations of government including investments in the higher educations of the population.

Since 1969, the total of taxes as a percent of GDP collected by the federal, state and local governments of the United States have fluctuated within a very narrow band. In 1969 the tax bite was 29.2 percent. By 1992 it was 29.4 percent. Between 1969 and 1992 the range was from 27.7 percent (1971) to 29.9 percent (1987). In contrast, among the OECD countries tax receipts as a percent of GDP rose from 29.2 percent in 1969 to 38.8 percent by 1992. While the United States was constraining tax growth, in the rest of the industrial world taxes constituted a steadily growing share of domestic economic activity.

Government Revenues versus Expenditures

Constraining tax growth does not equate with constraining government expenditures. Through 1979 the expenditures of federal, state and local governments remained in approximate balance with revenues. State and local governments consistently ran cumulative surpluses, while the federal government tended to overspend by three to 15 percent of revenues and occasionally ran surpluses.

Beginning in 1980 at the federal level expenditures continued to grow while revenues stabilized or even shrank. Between 1979 and 1992, federal government expenditures increased from 20.9 to 23.4 percent of GDP, while federal government revenues decreased from 20.3 to 19.9 percent

of GDP. The difference is the annual deficit in the federal budget, and it increased from 0.6 percent of GDP in 1979 to a peak of 4.7 percent of GDP in 1986 and has since shrunk somewhat to 3.5 percent of GDP by 1992.

The accumulation of these annual deficits in the federal budget is the national debt. Between 1979 and 1991, the federal government's gross debt had increased from $834 billion (34.3 percent of GDP) to $3683 billion (64.9 percent of GDP). State and local governments were increasing their indebtedness during this period also, so that by the end of the 1991 federal fiscal year government debt had increased from 46.8 to 81.1 percent of Gross Domestic Product.

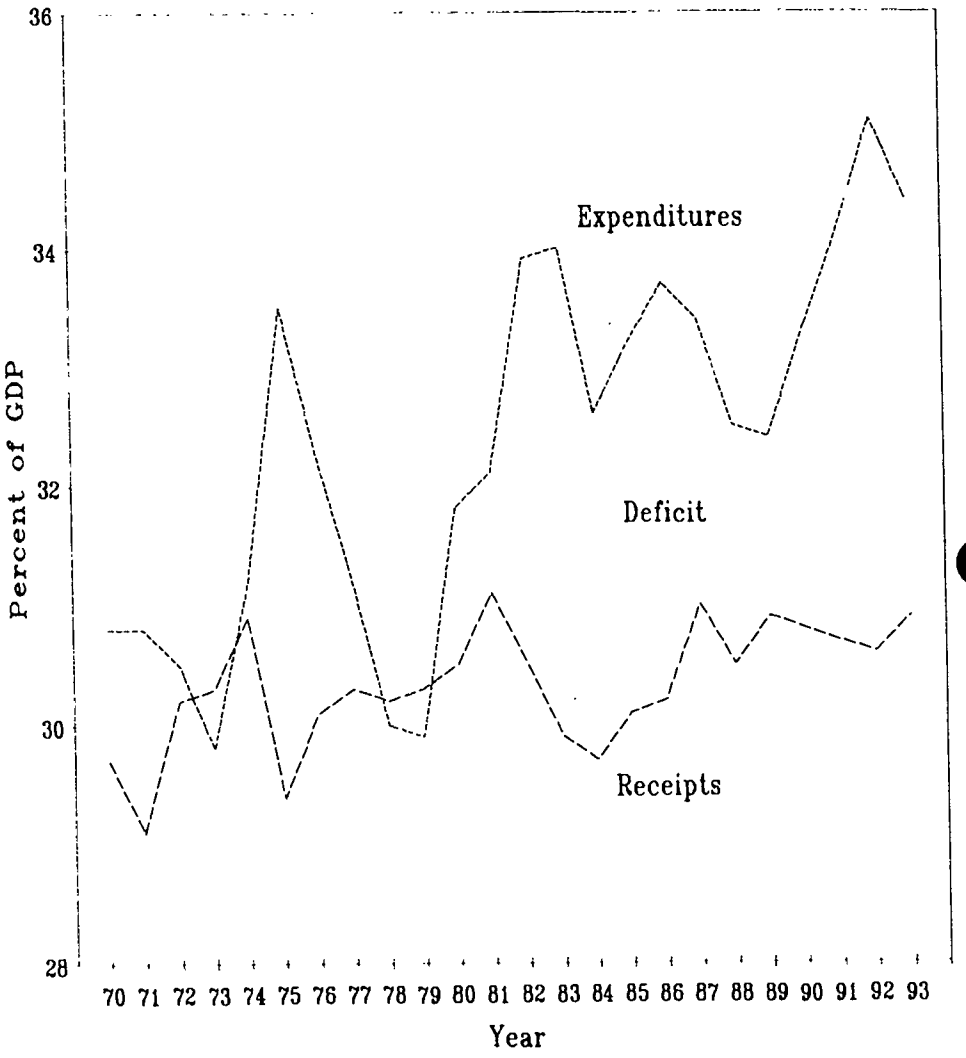
By at least one international comparison, government debt levels in the United States are not particularly high. But in an otherwise balanced federal budget today, interest payments on the budget deficits accumulated since 1979 now produce on their own an annual budget deficit in excess of $200 billion per year.

Tax and Spending Issues

The extraordinarily low level of federal, state and local taxes paid by Americans would by itself limit social investments. However, several peculiarities of the United States further restrict resources for social investment. These include historical budget commitments, such as national defense, and emerging commitments, such as interest payments on accumulated budget deficits, corrections expansion and health care.

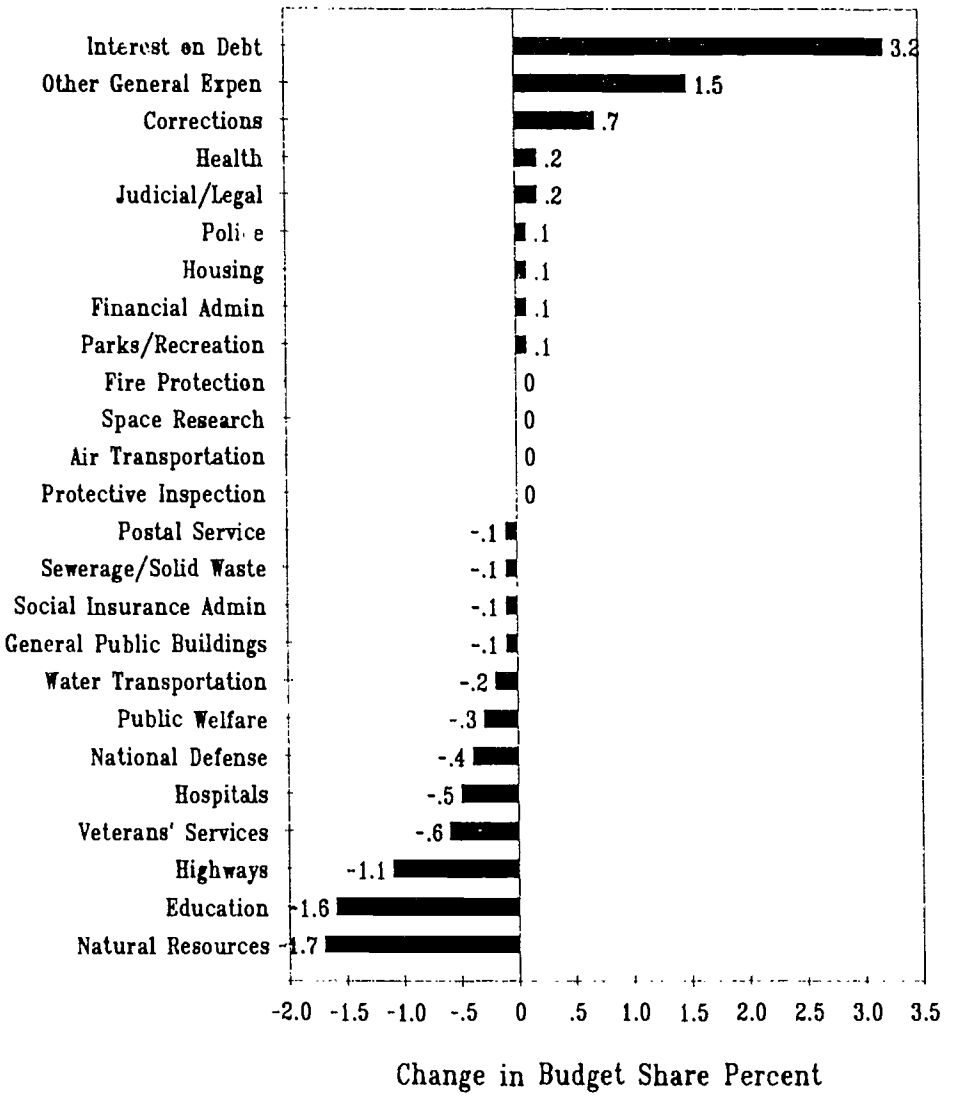
Military expenditures consume a larger share of GDP in the United States than they do in the other six largest economies among OECD countries. In the United States, military expenditures absorbed 4.9 percent of GDP in 1991, compared to 1.0 percent in Japan, 2.5 percent in West Germany, and 4.3 percent in the United Kingdom. The US commitment to military expenditures has declined sharply from 6.6 percent in the mid 1980s, but continues to draw more heavily from social investment than in any of the largest industrial economies of the West.

Total Expenditures and Receipts of Federal, State and Local Governments as a Percent of Gross Domestic Product 1970 to 1993



Health care expenditures consumed 13.4 percent of GDP in the US in 1991, compared to 6.8 percent in Japan, 8.5 percent in Germany and 6.6 percent in the UK. Among the seven largest economies in the OECD group, the share provided by government is about average at 5.9 percent, with non-government sources in the US paying several times what non-government sources in any other country provide for health. The health care issue is cost control: total expenditures for health have grown from 9.2 percent in 1980 to 12.4 percent by 1990 and 13.4 percent by

Change in Expenditure Shares of General Budget Categories of Federal, State and Local Goverments 1980 to 1991



1991. Health care is crowding out other social investments in both the private and public economy.

In federal, state and local government expenditures, shifts have occurred between 1980 and 1991. These shifts reflect expressed or implied priorities of governments in the United States through their allocations and reallocations of resources available to government, both taxes and borrowing.

- Over about the last decade, the budget categories that gained budget share were interest on debt, other general governmental expenditures and corrections.
- During this period, the budget categories that lost budget shares were natural resources, education, highways, veterans' services, hospitals, national defense, and public welfare.

In effect the political processes that decide not only levels of taxation but how government revenues are to be allocated appear to have decided to borrow or reallocate funds toward debt, general government and corrections (and related increases in judicial/legal and police costs), at the expense of natural resources, education, highways and the other budget categories that lost shares of expenditures between 1980 and 1991. So much for the future.

Changes in Federal Individual Income Tax Rates

Presidential candidate Reagan promised federal income tax cuts if elected, and he delivered on that promise. Between 1970 and 1990, the proportion of total income paid in federal individual income taxes was as follows:

1970	10.87%
1975	11.06%
1980	12.97%
1985	11.90%
1990	11.27%

The reduction in federal individual income tax rates after 1980 reduced annual federal revenues by about $60 billion in 1990. That is, instead of the $386 actually collected, the federal government could have collected $446 billion at 1980 rates, or about 15 percent more than it did. Since these funds were required for current government expenditures, the reduction in taxes meant that this much more had to be borrowed from the future to meet current operating and appropriations obligations.

Of course the reduction in federal income taxes between 1980 and 1990 was not shared equally across levels of family income--neither the tax rates nor the political system work that way. As one would expect those that have the most money received the greatest benefit from the tax reduction, and those that pay the least received the least benefit. Thus those that have

the highest income borrowed disproportionately from the future to finance their reduction in current federal individual income taxes.

Summary and Conclusions

There is no escaping the conclusion that Americans do not like to pay taxes. For the last twenty-five years, unlike the rest of the western industrial world, American government has held the cumulative bite from federal, state and local taxes about constant as a proportion of Gross Domestic Product. By 1992 the cumulative tax bite out of the domestic economy ranked the United States twenty-second out of twenty-four countries for which OECD reports data.

Despite constraining taxes, spending was allowed to increase, primarily at the federal level, financed through issuance of debt. As a result the cumulative indebtedness of federal, state and local governments grew from $1.1 trillion in 1979 to $4.6 trillion by 1991. In the 1990s the federal government has added over $200 billion each year to total indebtedness.

As debt has accumulated, so too has the cost of servicing that debt. The share of federal, state and local government expenditures for interest on general debt increased from 10.5 to 13.7 percent of all government expenditures between 1980 and 1991. This was a greater rate of growth than any of the other 24 expenditure categories tabulated in the National Income and Product Accounts of the United States. This *growth* increased all government expenditures for interest on debt from $189 billion to $247 billion, or by $58 billion in 1991, over debt service's share of government expenditures in 1980.

Another growth category is general government expenditures--a box of unknowns. This is the second largest growth category, from 6.5 to 8.0 percent of all government expenditures between 1980 and 1991. This added $27 billion to 1991 government expenditures.

The third growth area is corrections. Along with growth in government budgets for judicial/legal and police functions, expenditures to maintain civil order increased from 3.5 to 4.5 percent of federal, state and local governments between 1980 and 1991. This added $18 billion of expenditures in 1991 compared to 1980.

Within a stable government share of GDP, when one part of the budget increases, other parts of the budget must take reductions. Here there are many losers. Chief among these are natural resources, education and highways. By 1991 $31 billion had been taken out of government budget shares for natural resources, $29 billion from education, $20 billion from highways, etc.

Americans chose to spend more through government than they took in during the 1980s and 1990s. The new Congress has decided to change this, not by increasing taxes but rather by reducing expenditures.

Because some parts of the budget will increase in share--e.g., debt servicing and corrections--reductions in federal government expenditures in other areas will be required. If past is prologue, then natural resources, education and highways will absorb larger budget reduction shares than will other parts of government budgets.

In this fiscal climate, social investments to relieve destructive economic and social processes will be extraordinarily hard to come by. Social resources will be available to put ever more American men behind bars, but not to correct the conditions that lead to criminal behavior. By one recent projection, if the incarceration trends of the last twenty years continue into the future, every black person in the United States will be behind bars by the year 2066, and all remaining Americans will join them there by the year 2096.

Social resources available for social investments like education that provide socially productive returns will continue to be squeezed out by unproductive obligations like debt service, corrections and welfare for a growing population of poor. The accumulated social problems cannot be wished away by ideology, as some in Congress appear to believe.

Ultimately, Americans will get what they pay for. Unwilling to tax themselves to pay the costs of government they borrow instead. As the cost of serving debt increases, other social investments are further crowded out of already tight budgets.

The missed investment opportunities will incur costs of another sort, one that Americans seem willing to pay. These costs include more welfare and crime, more prisons, greater inequality of income, wealth and opportunity. So much for the opportunity agenda.

This is not who we are

by Marian Wright Edelman

Marian Wright Edelman is the President of the Children's Defense Fund, based in Washington, D.C. She began her work for children in the mid-1960s with the NAACP Defense and Educational Fund, a civil rights group. Since founding the Children's Defense Fund in 1973, she has achieved wide recognition as a spokesperson on behalf of American children and families. This essay appeared in ***The Progress of Nations, 1994****, United Nations Children's Fund, New York.*

Across much of the world today there is an evident will to pursue the path of progress that has been pioneered in the United States of America. As an American, I am well aware that there is much to admire about my own country and its achievements. But I also know that there is much that is not worthy of emulation.

In particular, I do not think any country would wish to emulate the way that America, as a society, is treating its children. One in five of those children is today living in poverty. Eight million of those children lack health children. Three of every 10 are born into a single-parent family. About 3 million a year are reported to be neglected, or physically or sexually abused - triple the number in 1980.

These rising indicators of social distress are now accompanied by an unprecedented upsurge in violence by and against children and young people. The overall murder rate of young people is seven times higher than in any Western European country. Every two days, the equivalent of a whole classroom full of young children dies by the bullet.

Violence *by* young people is rising equally steeply. Arrests of juveniles for murder and non-negligent manslaughter doubled in the 1980s.

Such trends cannot, of course, continue. For they are carrying America to the brink of social and economic disintegration.

No longer are the problems of endemic poverty, joblessness, family disintegration, domestic violence, racial intolerance, teenage pregnancy, and drug abuse just problems that happen to other people. Today, almost everyone is affected. Even a white middle-class child knows that we are a nation in crisis. We have lost the feeling that the generations of Americans have always held dear-that the future will be a bright one. The American dream is fading for too many American children.

When we Americans ask why this is happening, in the richest and most advantaged country on earth, many of us know that at bottom, the fault lies in the kind of values and the kind of progress we have been pursuing.

We know that we have oversold ourselves and our young people on one dominant aspect of our culture-its material success. By advertising and by example, we have communicated to our young people that to be admired and respected they must have particular and ever-changing possessions and lifestyles. Yet at the same time as parading before them these material definitions of success, we have denied to too many the legitimate means of achieving them-the education, the skills, the jobs and the opportunities.

As a result, many millions of our young people feel that they have no economic and social place in our society, that they have little to respect in themselves or to be respected for by others. And from this point of alienation and frustration, the path to drugs, alcohol abuse, crime, violence, and prison is ever open.

In the last decade, these tensions have been heightened by policies that have depended the divide between the rich and the poor and further exalted the material definition of success and purpose. Since 1980, the poor in America have seen their real incomes fall substantially. Safety nets have been dismantled, and an underclass has been created, white as well as black, so that there are today approximately 5 million more American children living in poverty than there were in 1973.

No civilized society, no democracy, no capitalism, can survive long under the strains arising from the frustrations, injustices, divisions and inequalities that we have created.

Under pressure from all of these forces, we are witnessing a breakdown in American values, in our common sense and community responsibility, and especially in our responsibility to protect and nurture our children. We are losing our sense of meaning, failing to find our sense of purpose in family, or community life, or in faith. We are dying spiritually. That is why the dream is fading. That is what is tearing the heart out of America today. And somehow we must find a way to teach our children that there is something better. We must cry out to them that this is not who we are.

If we are to pull back from the brink, then we need to acknowledge that the epidemic of violence and social disintegration that threatens to overwhelm our society is the result of policies that have favoured the rich over the poor,

and material values over human and spiritual values. Above all, we need to acknowledge that what we are now seeing is the result of years of neglect and lack of investment in our children.

To reverse the decline, we must first of all create jobs.

There is plenty of work to be done if we are to meet human needs, extend community programmes, and improve our social and physical environment. And there are many who need that work to enable them to earn a livelihood, to take back their dignity, and to fulfil their responsibilities as parents.

As well as jobs that are created by economic growth, we need to create at least a million new jobs targeted primarily to young people in poor and rural and inner-city areas. We must also build on the many, many good examples of educational initiatives that work, of community outreach projects, of programmes to prevent teen pregnancy, of efforts which offer skills and opportunities and hope. And we must build on them not here and there, piecemeal, but on a national scale.

To do this, we will have to refute the argument that government cannot afford to make such investments.

What we cannot afford to spend is $274 billion a year on external defence when the real enemy is within. What we cannot afford is $6 billion for a new Sea Wolf submarine, and $25 billion for a new F-22 fighter, while denying our children decent health, education, opportunity, and hope. If we are to keep the dream alive, if we are to offer hope and self-respect to our young people,then we have no greater priority than renewing investment in jobs, in health, in education, in our children's and our nation's future.

Today, with new national leadership, a beginning has been made. We have the Family and Medical Leave Act, an expanded Earned Income Tax Credit to help lower-income working families, a Hunger Relief Act, and a $1 billion Family Preservation Programme.

But no President can do this job alone. No Congress can do it alone. We must also confront the problem of child neglect in our homes, in our families, in our communities, and in our justice system. This has to be the responsibility of every family, every community, every faith, every neighbourhood, every American.

Every one of us is responsible. It is time to begin salvaging our ideals.

Postsecondary Education
OPPORTUNITY

The Mortenson Research Letter on Public Policy Analysis of Opportunity for Postsecondary Education

Number 39 | Iowa City, Iowa | September 1995

The question . . . *. . . many women ponder*

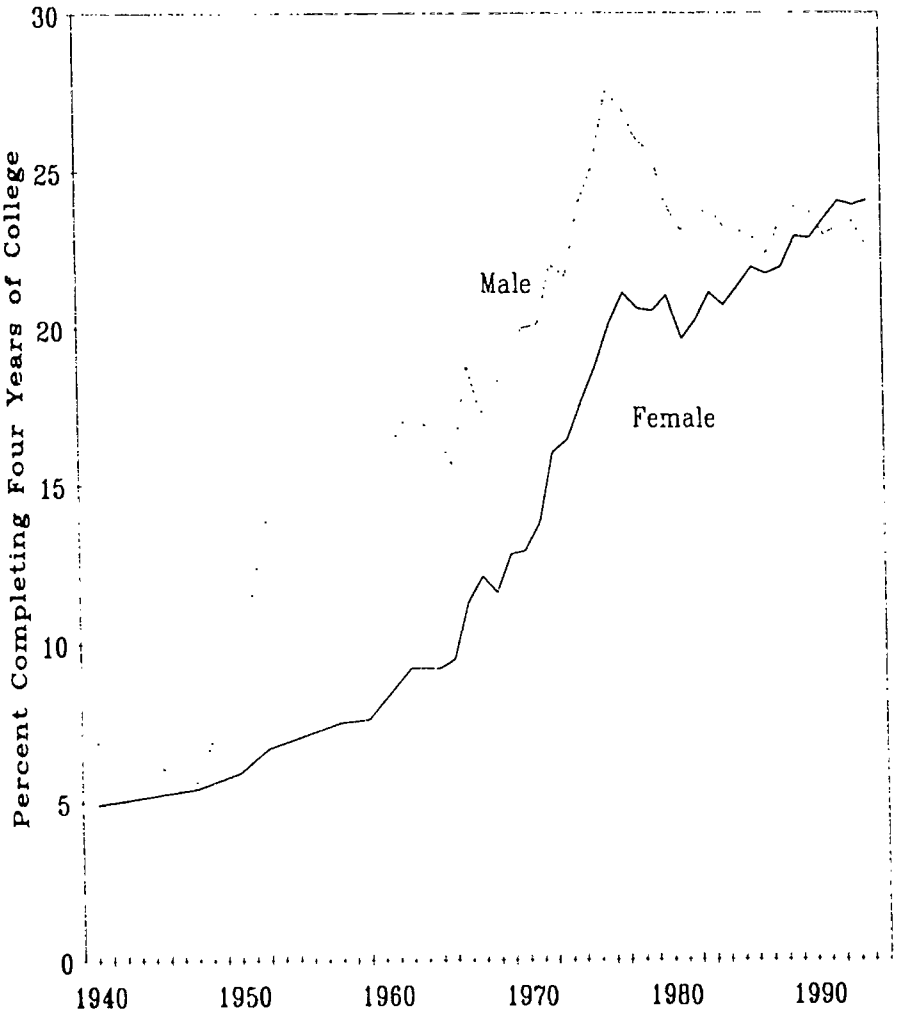
What's Wrong with the Guys?

By so very many measures, higher educational opportunity for American women in the post World War II era is a record of astonishing success:

- *Women have been graduating from high school at higher rates than men since 1976, and the gap is growing.*
- *Women high school graduates have been continuing their educations after high school at greater rates than men since 1988, and the gap is growing.*
- *Women who enter college still graduate with bachelors degrees at lower rates than men, but the gap is closing. By 1992 the gap closed briefly. Women who start college will probably surpass men in bachelor's degree completion before the end of the 1990s.*
- *The product of high school graduation rates, college continuation rates and college completion rates is the college attainment rate shown to the right. That rate for women ages 25 to 29 surpassed the rate for men in 1991 and the gap is widening.*

This record of success for women raises the question: What is wrong with the guys? Why have high school graduation and college continuation rates for men fallen so far behind those of women? When the labor market offers such rich rewards for the college educated--both men and women--why have only women responded? Why do women seek the higher living standards that follow from becoming higher educated while men pass on the opportunity?

Four Year College Attainment Rate
by Gender Ages 25 to 29 Years
1940 to 1994



These questions have the most profound implications for the nature of the labor force, for our political life, for family life, for virtually every aspect of the human condition where men and women have had gender-specific roles, perspectives, interests, and where these differences are exercised based on educational attainment. For example, as earnings

roles change in families--as men earn less and women earn more--one might reasonably expect expenditure patterns based on preferences to shift as well.

What our data suggest is that the failure of men to rise to the challenge to increase greatly their educational attainment, at the same time that women have moved right on past men in their own pursuit of education, has, is and will continue to alter nearly every aspect of our economic, social, political and family lives.

Here we ponder not the success of women in their pursuit of education, but the failure of men to increase their educations commensurate with the increasing educational requirements of the labor force. This analysis offers more questions than answers. It highlights the different worlds in which women and men operate: the Venusians are clearly succeeding where the Martians have stumbled.

The Data

This analysis is structured around demographic data from the Census Bureau that describe the flow of males and females through the educational system. This flow is described at three stages:

- High school graduation,
- College participation for those who graduate from high school, and
- College completion for those who enter college.

The product of these stages is the proportion of the population that has completed four years or more of college or earned at least a baccalaureate degree. The four-year college attainment rate for males and females for the years between 1940 and 1994 is shown in the chart on the previous page.

The source of data used in this analysis is the Census Bureau's Current Population Survey. Data collected in this survey are published primarily by the Census Bureau in the P-20 series of *Current Population Reports*. One of these annual reports is based on data collected in the October Current Population Survey.

Bruno, R. R., and Adams, A. *School Enrollment-Social and Economic Characteristics of Students: October 1993.* U.S. Bureau of the Census, Current Population Reports, P20-479, U.S. Government Printing Office, Washington, D.C., 1994.

The other annual report is based on data collected in the March Current Population Survey.

Kominski, R., and Adams, A. *Educational Attainment in the United States· March 1993 and 1992.* U.S. Bureau of the Census, Current Population Reports, P20-476, U.S. Government Printing Office, Washington, D.C., 1994.

Census Bureau staff have shared pre release data from the March 1994 CPS of educational attainment. Because this brings our time series up to date, we are grateful for their favor.

One special note here on important changes in Census Bureau data reporting and definition. In 1992 the Census Bureau changed the definition of "some college." Prior to 1992 students who did not complete a full year of college were not counted as having entered college. Beginning in 1992, these are counted among those with some college but no degree. This change affects--significantly--our time-series description of four-year college completion rates later in this report.

The second change is in the measurement of educational attainment. Prior to 1992 educational attainment was measured in years of

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Mission Statement

This research letter is founded on two fundamental beliefs. First, sound public social policy requires accurate, current, independent, and focused information on the human condition. Second, education is essential to the development of human potential and resources for both private and public benefit. Therefore, the purpose of this research letter is to inform those who formulate, fund, and administer public policy and programs about the condition of and influences that affect postsecondary education opportunity for all Americans.

schooling completed. Beginning in 1992 data on educational attainment is measured as highest degree completed. Thus, a student who in the past had completed four years of college was assumed to have completed a bachelor's degree. But indeed that student may not have yet earned the degree. Other surveys of time-to-degree by the National Center for Education Statistics indicate that now only about 65 percent of bachelor's degrees are earned in four years.

We applaud the Census Bureau's change in definition of educational attainment. However, we wish that they had implemented this definition decades earlier.

In addition we supplement this demographic data with data that further describe important aspects of each of these stages.

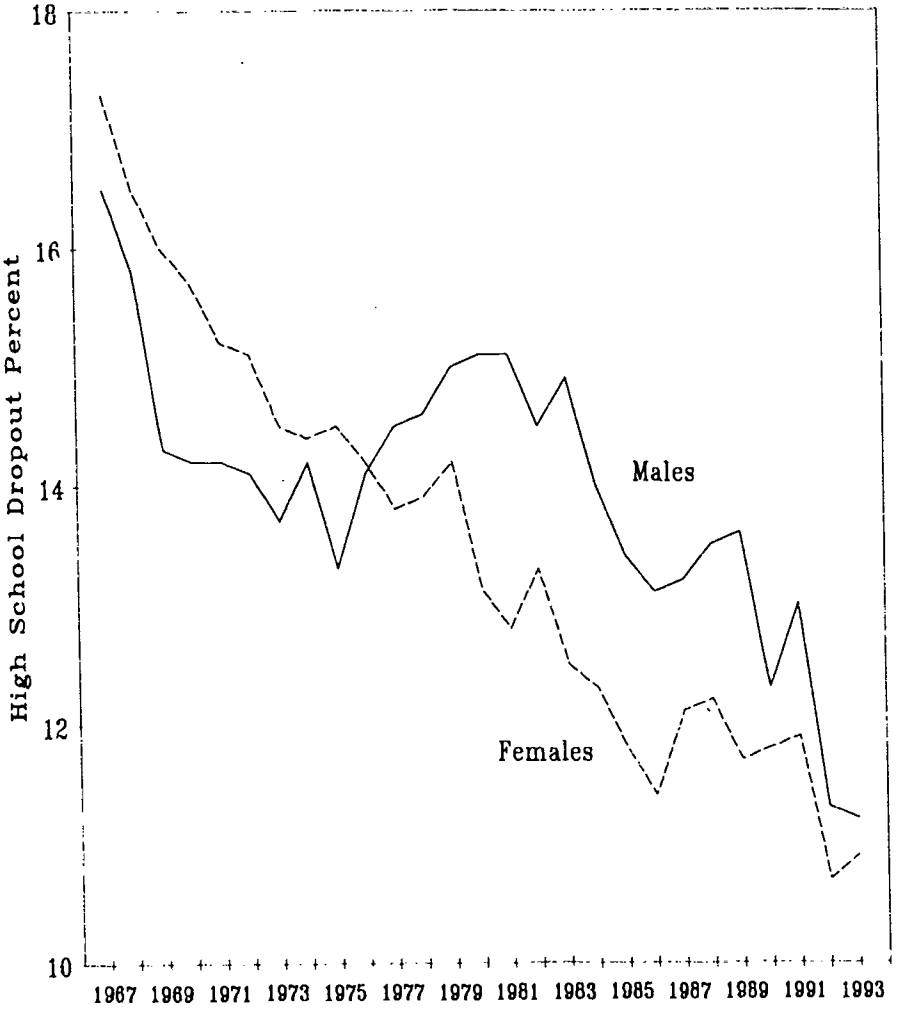
High School Graduation

The first of the three hurdles along the path to a baccalaureate degree is high school graduation. This hurdle cuts many out of the race, and affects those from different demographic groups differently. Since the mid 1970s, women have passed this hurdle more successfully than have men.

The chart on the right shows high school dropout rates for males and females between the ages of 16 and 24 years. All states require children to be enrolled in school at least through age 16 (32 states require enrollment through 16 and 9 each require it through 17 and 18 years). Beginning at age 16 serious hemorrhaging in school enrollments begins and continues until the last few doctorates are finally awarded at the end of the formal educational path.

Between 1967 and 1975 the high school dropout rate for females exceeded the rate for males. Then, between 1976 and 1981 the male dropout rate increased while the female rate continued to decline. Males in this age range have never since caught up with the advantage gained by women during this era of young male irresponsibility following the end of the Vietnam War and the ending of military conscription.

High School Dropout Rate Among Males and Females 16 to 24 Years Old 1967 to 1993

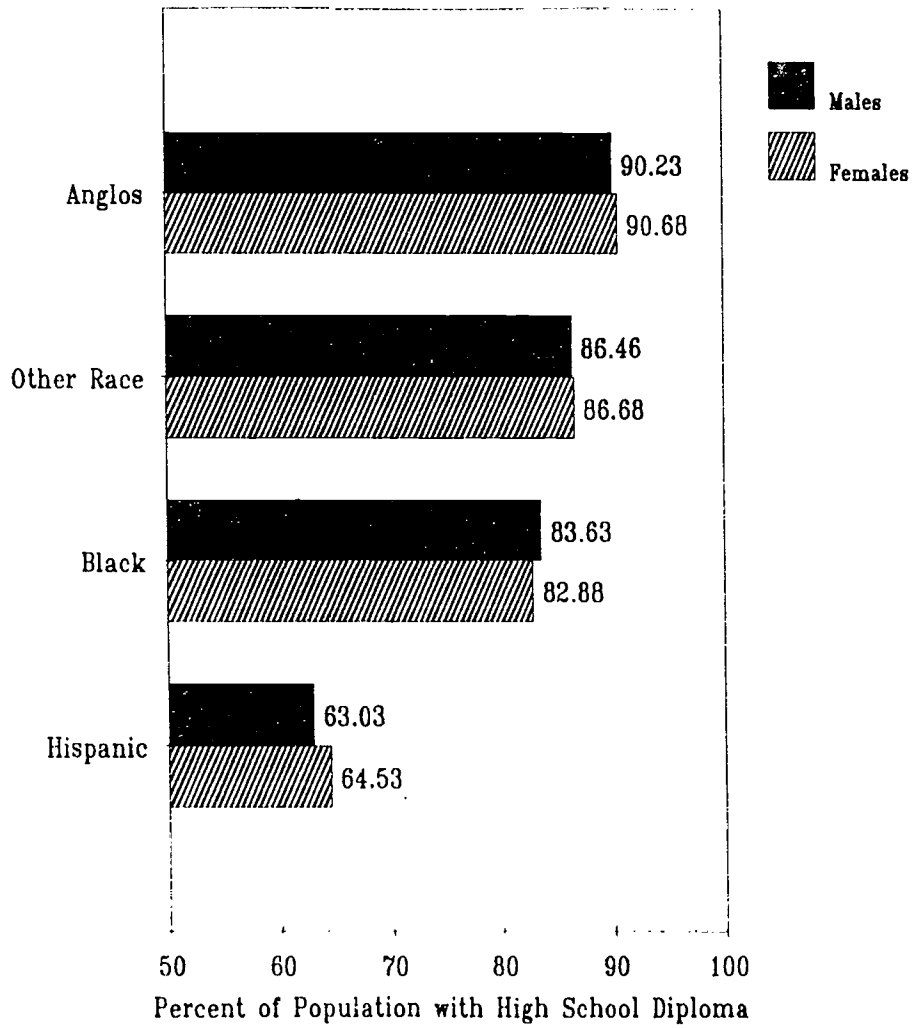


We have examined high school graduation rates for males and females by race and ethnicity for 1994. The data are presented in the chart on the following page.

Here we divide the population of 18 to 24 year olds into four distinct, non-overlapping groups: non-Hispanic whites which we call Anglos, non-Hispanic blacks, blacks, and those of other race which are mainly Asian but also include American Indians. High school graduation rates were highest for Anglos, somewhat lower for other race and blacks, and notably lower for Hispanics.

In 1994 females ages 20 to 24 were slightly more likely than males to be high school graduates. Females had slightly higher high school graduation rates than males among Anglos, Hispanics and those of other race. Among blacks, males held an almost

High School Graduation by Gender and Race/Ethnicity Among Those ages 20 to 24 Years 1994



imperceptibly small advantage over females.

The great separation in educational attainment between men and women does not appear from these data to begin to any significant degree at the first hurdle along the path of educational attainment. Women do graduate from high school at greater rates than do men, but the differences are tiny compared what comes next.

College Participation

The rate at which high school graduates enroll in college is the college participation rate. Here we examine a subset of college participation, namely the rate at which recent high school graduates continue their studies in college the following fall.

Previous studies have found that those most likely to earn a bachelor's degree from college are those who pursue their higher educations immediately after high school. These studies also find that enrolling full-time on a four-year college campus adds to chances for earning the bachelor's degree.

These data are collected in the Current Population Survey and have been published for the last twenty-five years by the Bureau of Labor Statistics. The college continuation rate is college freshmen enrolled in October who graduated from high school anytime during the previous academic year.

The first chart on the next page shows the college continuation rate for male and female high school graduates from 1959 through 1994.

- Between 1959 and 1964 the college continuation rate for males increased by 6.4 percent, from 54.2 to 60.6 percent. The 1994 rate, however, is still below the peak of 63.2 percent reached in 1968 during the Vietnam War.
- Between 1959 and 1964 the college continuation rate for females increased by 24.6 percent, from 38.6 to 63.2 percent. The increase in the college continuation rate for females was nearly four times greater than that for males during this period. The 1994 rate for females is down from the peak of 67.1 percent reached in 1991.

The erosion of the large advantage male high school graduates once held over females in college continuation is illustrated in the second chart on the following page. This area chart simply plots the difference between the male and female college continuation rates from the chart above it over the time period shown.

- During the 1960s the college continuation rate for males exceeded the rate for females by 10 to 16 percent.
- Between 1969 and 1976 the gap suddenly narrowed.
- Between 1976 and 1987 the gap was essentially closed.
- Between 1988 and 1994 the college continuation rate for male high school graduates has fallen about 5 percent below the rate for women.

We have further examined differences between male and female college participation rates by race/ethnicity. Again we have used the four distinct population groups used for the high school graduation rate analysis: Anglos, blacks, Hispanics and other race.

The results are shown in the chart on the following page. College participation rates among 20 to 24 year olds are highest among the other race category, lower for Anglos, and lowest and about equal for blacks and Hispanics.

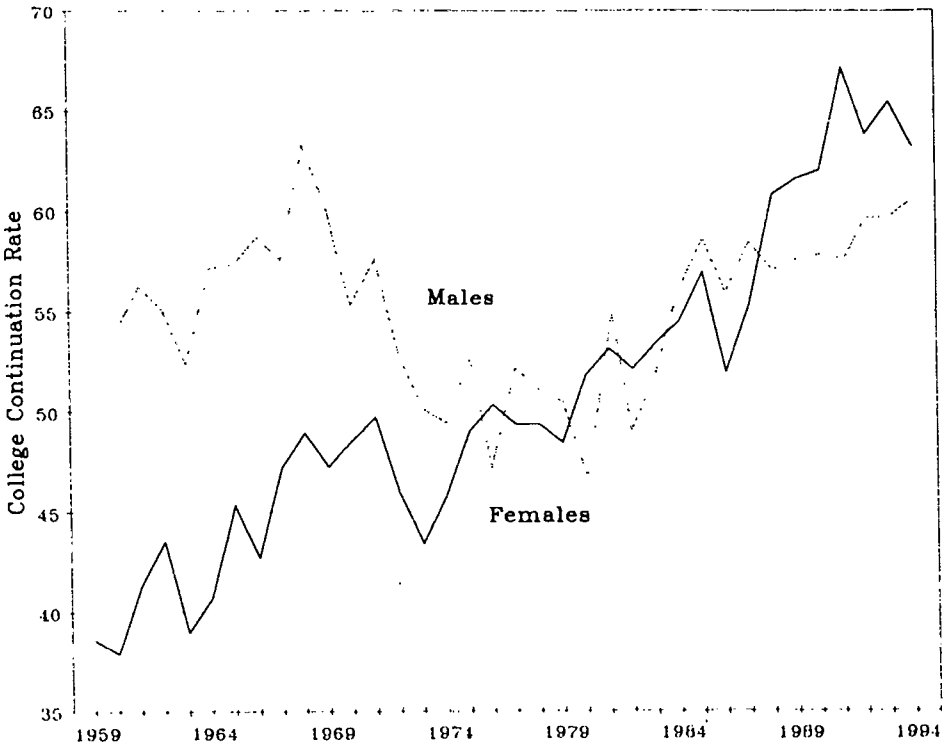
By gender college participation rates are nearly identical for the other race (mainly Asian) category. Both male and female high school graduates enroll in college at nearly 74 percent.

The above pattern, however, does not hold for other racial/ethnic groups: female high school graduates between 20 and 24 years are considerably more likely than males to enroll in college.

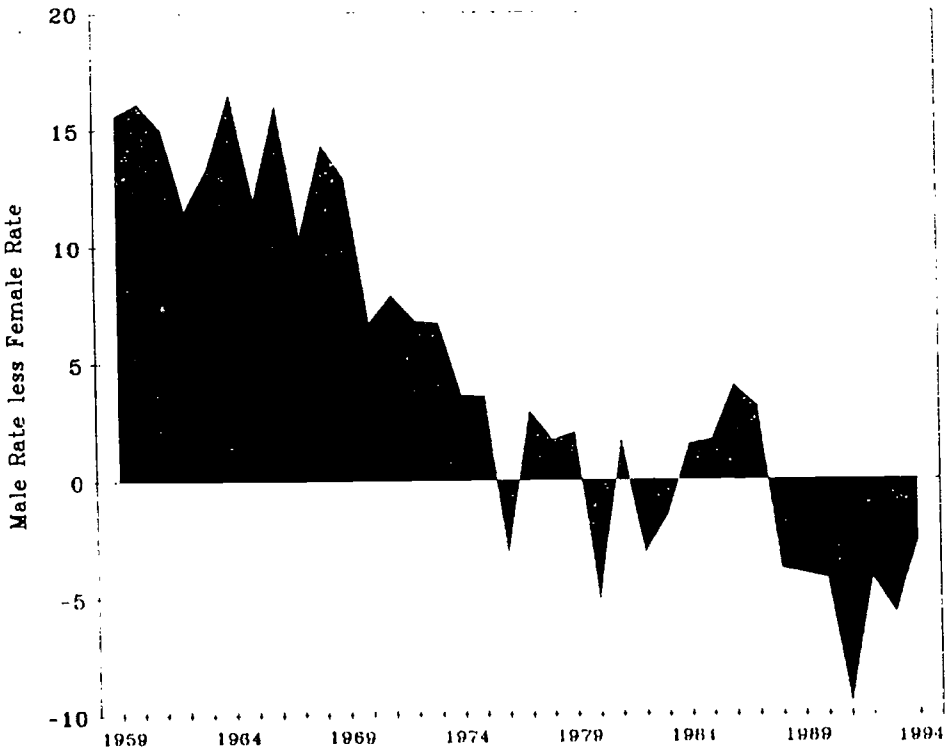
- Among Anglos, the college continuation rate for females is about 5 percent greater than the rate for males.
- Among blacks the rate for females exceeds the rate for males by nearly 8 percent.
- Among Hispanics the rate for females exceeds the rate for males by more than 8 percent.

At the second hurdle along the path to a baccalaureate degree, women start to move ahead of men. This is less true for women of other race where both high school graduation rates and college participation rates are quite similar for men and women. But it is certainly true for Anglo, black and Hispanic women who graduated from high school at similar rates but continued their educations in college at dissimilar rates.

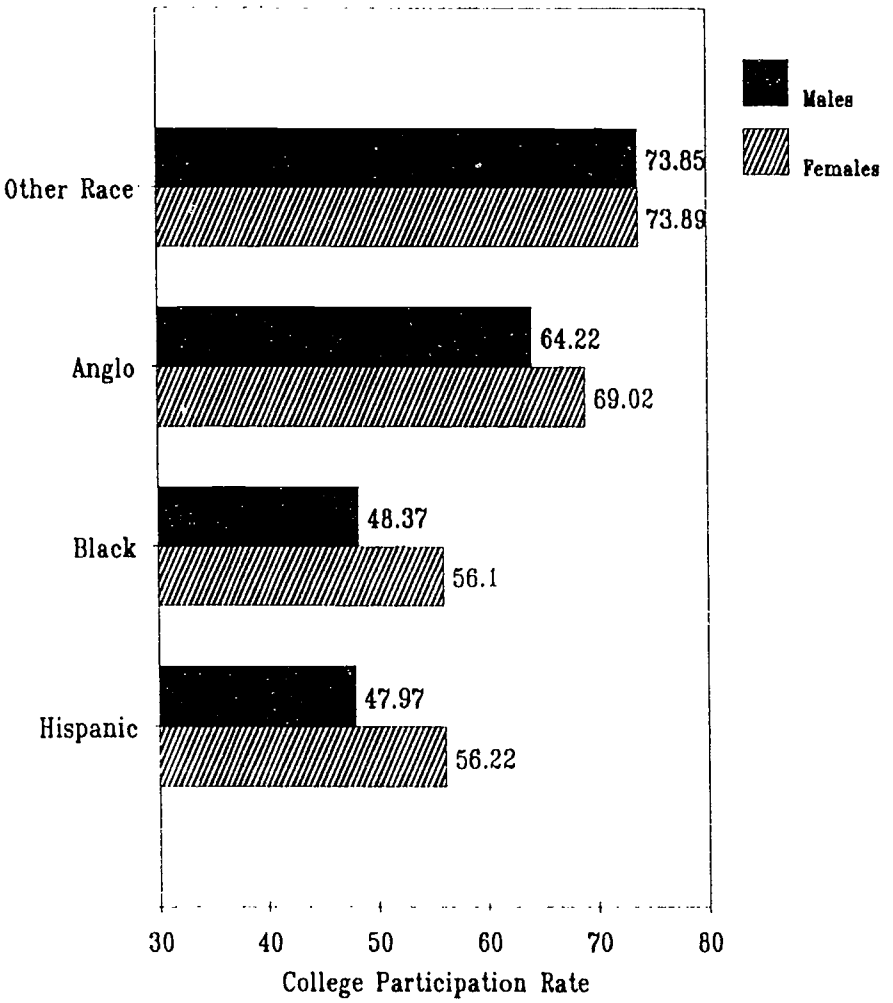
College Continuation Rates by Gender
for Recent High School Graduates
1959 to 1994



Difference in College Continuation Rates
Between Males and Females for Recent High School Graduates
1959 to 1994



College Participation by Gender and Race/Ethnicity
20 to 24 Year Old High School Graduates
1994



College Completion

The third hurdle is persistence through collegiate study to degree completion. For our purposes here we mean baccalaureate degree attainment.

As noted earlier, measurement issues influence our interpretation of trends, but only slightly. Thus, in the top chart on the right page we have broken the lines plotting four-year college completion rates for males and females to denote the differences in definitions. More about this later.

As the top chart on the right page shows, four-year college completion rates among persons 25 to 29 years of age have tended to meander downward since the 1960s for males and upwards for females.

Among 25 to 29 year old males with some college, the proportion having completed four years or more by ages 25 to 29 has declined slightly from about 55 percent in the 1960s to about 51 percent in the late 1970s, then upward slightly to about 54 percent by the late 1980s.

Since 1990 the four year college completion rate has been declining. Part of this decline is attributable to the changing definitions for some college and baccalaureate degree completion employed by the Census Bureau beginning in 1992. However, separate from these definitional changes, male four year college completion appears to be dropping sharply in the 1990s.

For 25 to 29 year old females, four year college completion rates appear to have tended upward between the mid 1960s and about 1990. From 45 percent of those with some college completing four years in the mid 1960s, the rate for women increased to more than 50 percent by the late 1970s, dipped below 50 percent in the early 1980s, and then rose above 50 percent by the late 1980s.

In the 1990s, the baccalaureate degree completion rate for women between 25 and 29 years appears to be dropping even more sharply than it is for men. Because of the recent changes in Census Bureau definitions for both the numerator and denominator of these rates, we are reluctant to attach too much meaning to them at this time. However, these data raise a warning flag about baccalaureate degree completion in the 1990s that deserves careful monitoring. Baccalaureate degree completion appears to be in trouble, and given the age of the cohort (25 to 29 years), this could be reflecting problems in student persistence that began in the late 1980s.

We have also examined baccalaureate degree completion for those 25 to 29 years old by gender and our four racial/ethnic groups for 1994. The results vary by group.

Among Anglos (non-Hispanic whites) males were somewhat more likely than females to complete their baccalaureate studies, 49 to 46

percent. The Anglos, however, were unique in this respect.

Among those of other race, mainly Asians, females were considerably more likely than males to have earned a bachelor's degree, 60 to 50 percent. Baccalaureate degree completion rates for other race males were similar to those for Anglo males, but very large differences existed between other race and Anglo females that had entered college.

Among both blacks and Hispanics, baccalaureate degree completion rates for women were well above those for males. Among blacks women had completion rates that were about 7 percent above men. Among Hispanics women had completion rates that were about 5 percent above those for males.

Among all minority groups--other race, blacks and Hispanics--college completion rates appear to be special problems.

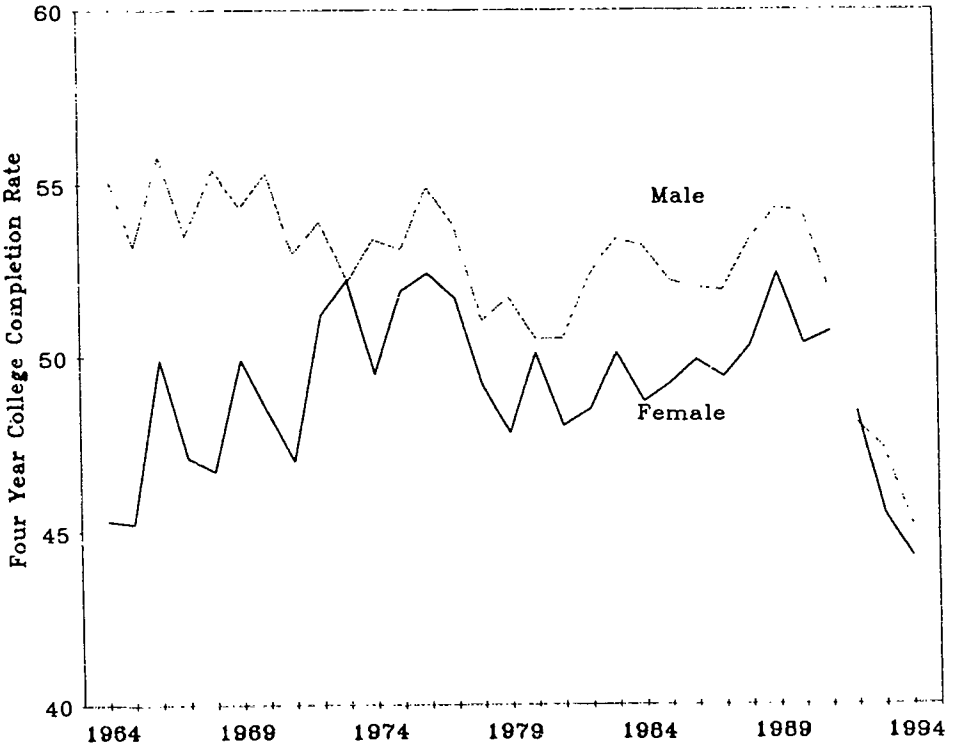
Bachelor's Degree Attainment

Those that make first the high school graduation hurdle, then the college participation hurdle, and finally the four year college completion hurdle end up with a bachelor's degree.

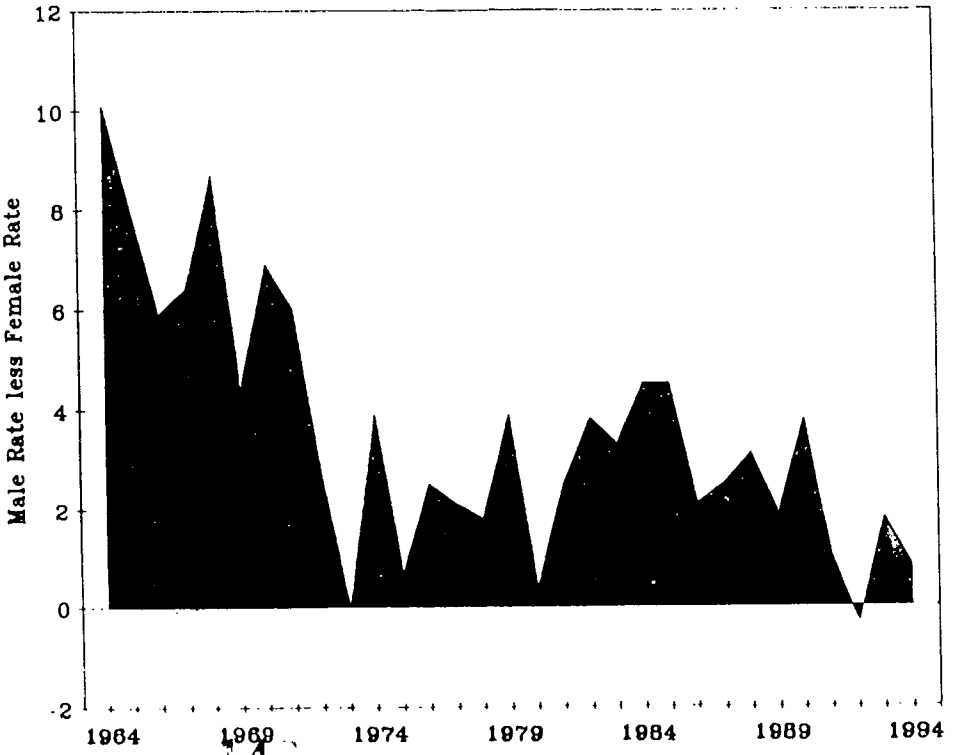
The proportion of the population of men and women age 25 to 29 with at least the bachelor's degree is shown in the chart on the first page of this issue of OPPORTUNITY. In 1994 23.3 percent of the population in this age range had received at least a bachelor's degree from college. For males the proportion was 22.5 percent, and for females 24.0 percent had at least the four year degree.

Between 1940 and the mid 1970s, the four year college attainment rate increased for both men and women. The rate for men appears to have received a particularly large boost in the early 1950s when males educated

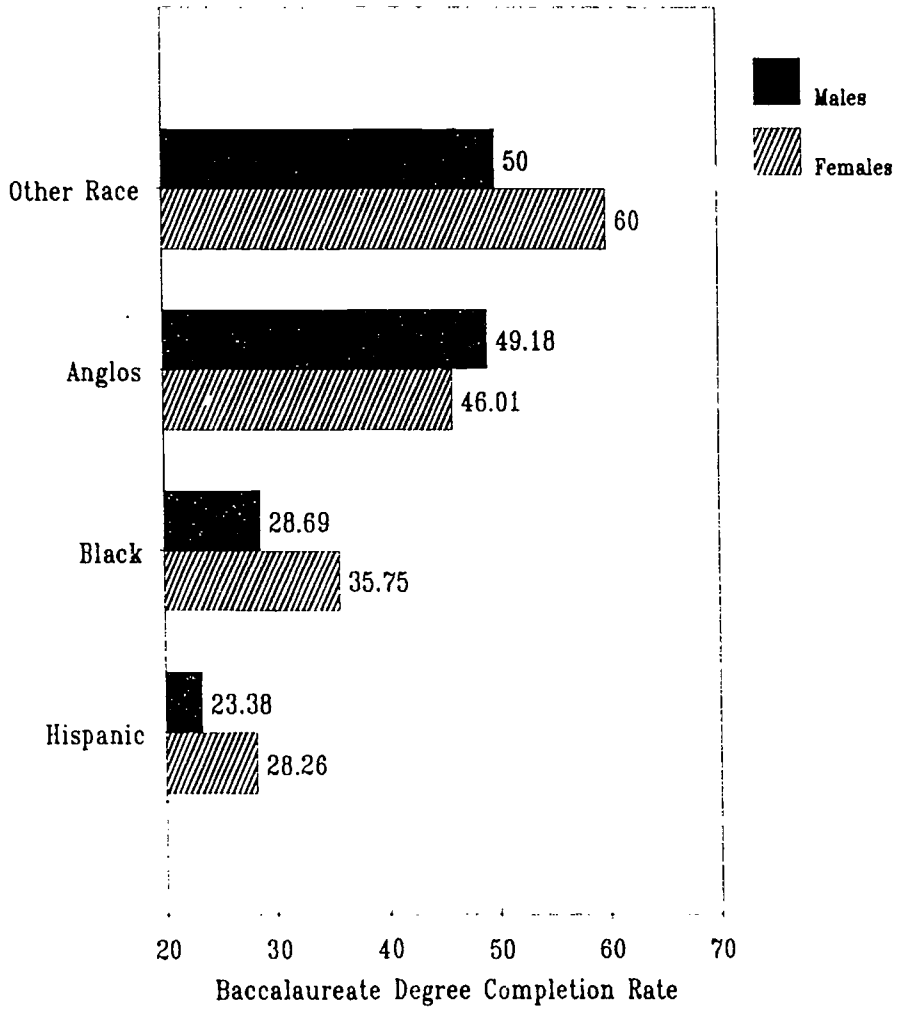
Four Year College Completion Rates
by Gender for Persons Age 25 to 29 Years
1964 to 1994



Difference in Four Year College Completion Rates
between Males and Females for Persons Age 25 to 29 Years
1964 to 1994



Baccalaureate College Completion by Gender and Race/Ethnicity Among Those Ages 25 to 29 Years 1994



under the GI Bill graduated from college and entered the workforce. The rate for men appears to have received another particularly large boost in the 1970s and early 1980s during the Vietnam War when deferment from military conscription was offered males that were enrolled in college on a full-time basis. Many thousands of men responded to this incentive to complete high school and pursue collegiate study on a full-time basis.

Since 1976, however, four year college attainment rates have been on the decline for males. Between 1976 and 1994, while the four year college attainment rate for men was *decreasing* by 5 percent (from 27.5 to 22.5 percent), the four year college attainment rate for women was *increasing* by 3.9 percent (from 20.1 to 24.0 percent). The 1994 four year college attainment rate for men was the lowest it has been in the last twenty years, since 1973 when it was 21.6 percent. We take this as an indication that indeed men and women are living in different worlds.

We have examined bachelor's degree attainment data by race/ethnicity in addition to gender. While space precludes us from printing the chart containing these data, this chart is available to subscribers on request. These data show that the proportion of women age 25 to 29 years with a bachelor's degree exceeds the proportion for men for each of the four racial/ethnic groups.

This gap is widest for women of the other race (mostly Asian) category. In 1994 36.4 percent of other race women in this age range held a bachelor's degree, compared to 29.5 percent for men. This gap is created entirely through greater four year college completion rates because men and women of other race both graduate from high school and participate in college at essentially identical rates. Women in this group only pull away from males at the third hurdle--four year college completion.

Anglo women are more likely than men to have completed a bachelor's degree by the slimmest of margins, 27.5 to 27.3 percent in 1994. Anglo males graduate from high school and complete four years of college at greater rates than do women, but women who graduate from high school enroll in college at considerably greater rates than men and thus offset the male advantage in these areas.

Black women are more likely than back men to gain a bachelor's degree by age 25 to 29 by a substantial margin, 15.4 to 11.6 percent. Although black men are likely to graduate from high school at slightly higher rates than black women, the women more than make up for this with higher college participation and completion than black men.

Hispanic women are more likely than men to earn a bachelor's degree by age 25 to 29 by a small margin, 8.0 to 6.6 percent. They gain this advantage at all three hurdles: by graduating

from high school, enrolling in college and completing college at greater rates than Hispanic men.

Summary and Conclusions

For the last twenty years, educational attainment through the baccalaureate degree has been going in opposite directions for young men and women.

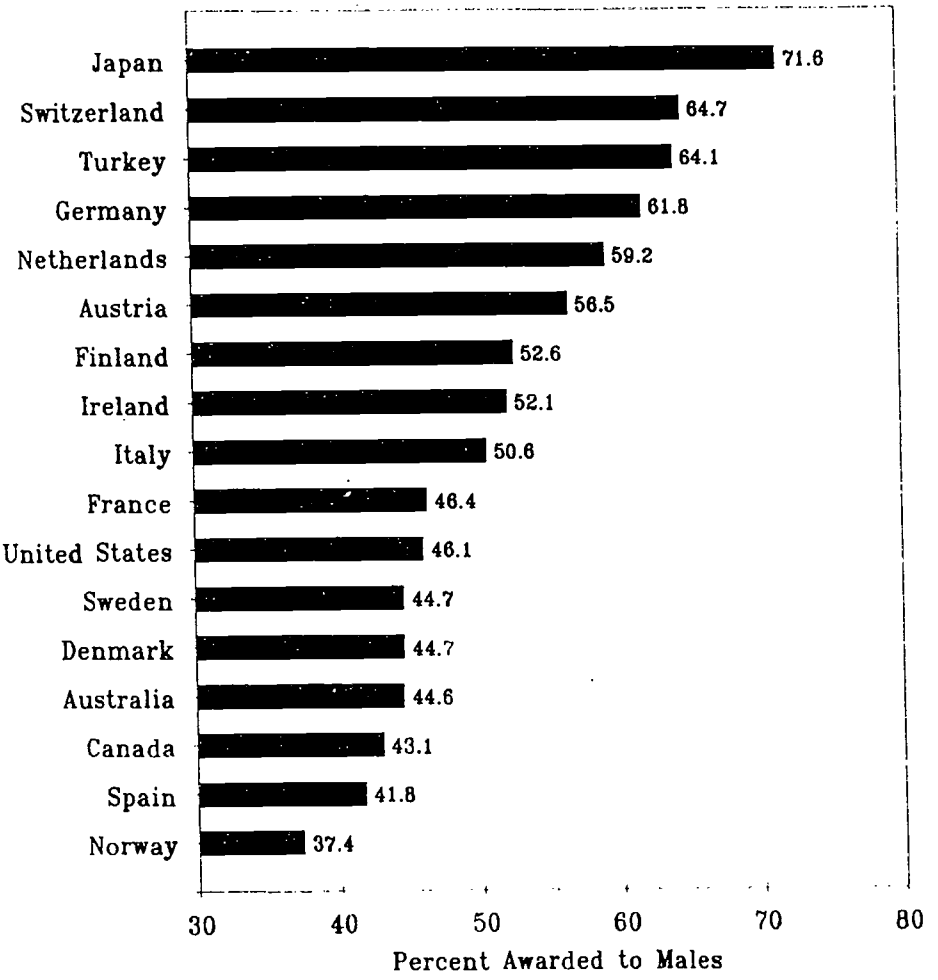
For women the record is one of enormous progress over the last 55 years. The combination of steadily increasing high school graduation, college participation and college completion rates for women has produced, by 1994, the largest proportion of women with a bachelor's degree at any time in history.

A quite different and unsatisfactory record for males exists. Between the late 1940s and 1976, young males made simply staggering progress in educational attainment. The share of the 25 to 29 year old male population with a bachelor's degree from college rose from 5.6 percent in 1947 to a peak of 27.5 percent in 1976.

After 1976, it was mostly downhill for males. By 1994 the proportion of the male population with four years or more of college was down to 22.5 percent, or about where it was in the early 1970s. This decline was produced by steady deterioration in college completion and erratic fluctuation--without growth--in college participation. These problems were aggravated by the vacation from responsibility taken by males dropping out of high school in the late 1970s.

We note that while educational attainment for men was declining, educational attainment for females was advancing. Thus, one cannot attribute the cause of male problems to problems in the delivery of educational opportunity through policy factors such as funding, tuition, financial aid or outreach efforts.

Proportion of Bachelor Degrees Awarded to Males
1991



Moreover, declining educational attainment for males (accompanied by advances for females) has parallels in other areas. For the last several decades labor force participation (employment plus unemployment) has declined for males while it has increased for females.

What we do see clearly is the powerful effect of war on male college enrollments. Following World War II, educational benefits through the GI Bill brought many young veterans into college who were the first in their families to attend college. During the unpopular Vietnam War, the option of draft deferment for full time college enrollment persuaded many young men to complete high school, enroll in college and pursue full-time collegiate study. The effects of this persuasion were evident in male college graduation for several years after the draft ended. But for more than twenty years, males have not had the incentive nor benefits of war to pursue collegiate study.

This analysis raises more questions than it answers. But if nothing else, it suggests that some portion of our concerns about equality of educational opportunity for women should be redirected to discovering and remedying the problems of educational opportunity for men. Something short of war at least.

Preliminary Report: State Appropriations for Higher Education and Financial Aid

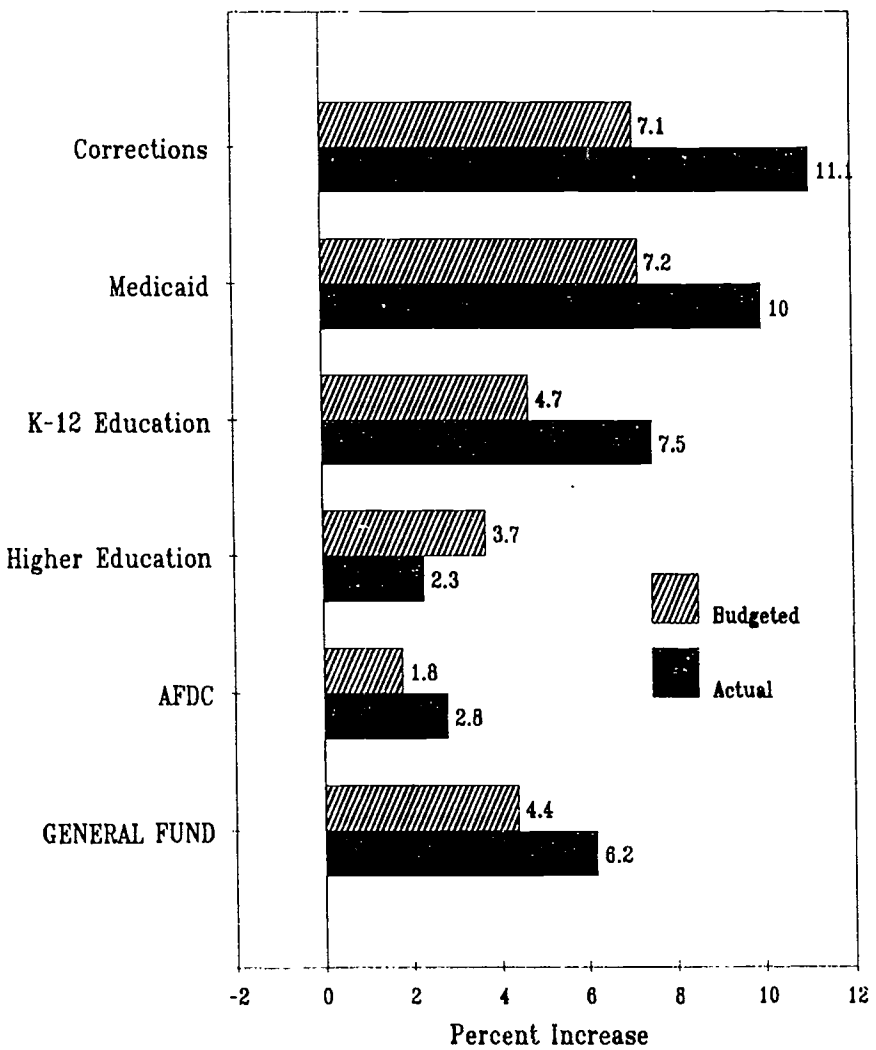
The National Conference of State Legislatures has released its preliminary report on state budget actions in 1995 for the 1995-96 fiscal year, now underway. The preliminary survey results are based on reports from 34 states. The final report is scheduled to be released in October.

Generally, the results of the FY1996 appropriations processes in the states are similar to those from prior years. Increases in higher education appropriations were less than K-12 education appropriations increases, and substantially less than increases for corrections and Medicaid. Locking up an ever-growing share of the population and paying nearly unconstrained health care bills for the poor continue to be favored by governors and legislators over educational investments that offer promise of reducing these kinds of expenditures in the future.

However, the NCSL survey contained an unpleasant surprise. Among the 34 reporting states, general funds increased over expectations in FY1995 due to an expanding economy. As a result, actual funding growth increased substantially over original appropriations for corrections (by 4.0%), K-12 education (by 2.8%), Medicaid (by 2.8%) and AFDC (by 1.0%). However, the actual funding increase for higher education was 1.4 percent less than was originally appropriated in the 34 states.

We add to the NCSL survey report the results of our own flash survey of state appropriations for student grant programs. Our survey covers those states with need-based undergraduate grant programs that are larger than about $5 million per year each. Responses were received from 27 states, with five yet to report. Remaining states have quite small state grant programs.

Growth in General Fund Expenditures
FY1994 to FY1995



The NCSL Survey Data

The annual survey of state budget and tax actions is conducted by the fiscal program staff of the National Conference of State Legislatures with the participation of the National Association of Legislative Fiscal Officers.

The survey is reported in two stages. The preliminary report summarizes reports received by the first 30 to 40 states reporting (34 this year). The final report, scheduled for publication in October, will contain data for all 50 states plus the District of Columbia and Puerto Rico. The NCSL report

contains information on both budget and tax actions. Our interest here is in the appropriated budgets for fiscal year 1996, particularly for higher education.

State Budget and Tax Actions 1995, Preliminary Report. July 1995. Denver: National Conference of State Legislatures.

The data collected in the survey include both appropriated and actual expenditure increases for FY1995 over FY1994, and appropriated expenditure increases for FY1996 over FY1995. For higher education and K-12 education, additional appropriations are reported for earmarked appropriations. For higher education these earmarked appropriations amount to less than 10 percent of total appropriations.

FY1994 to FY1995

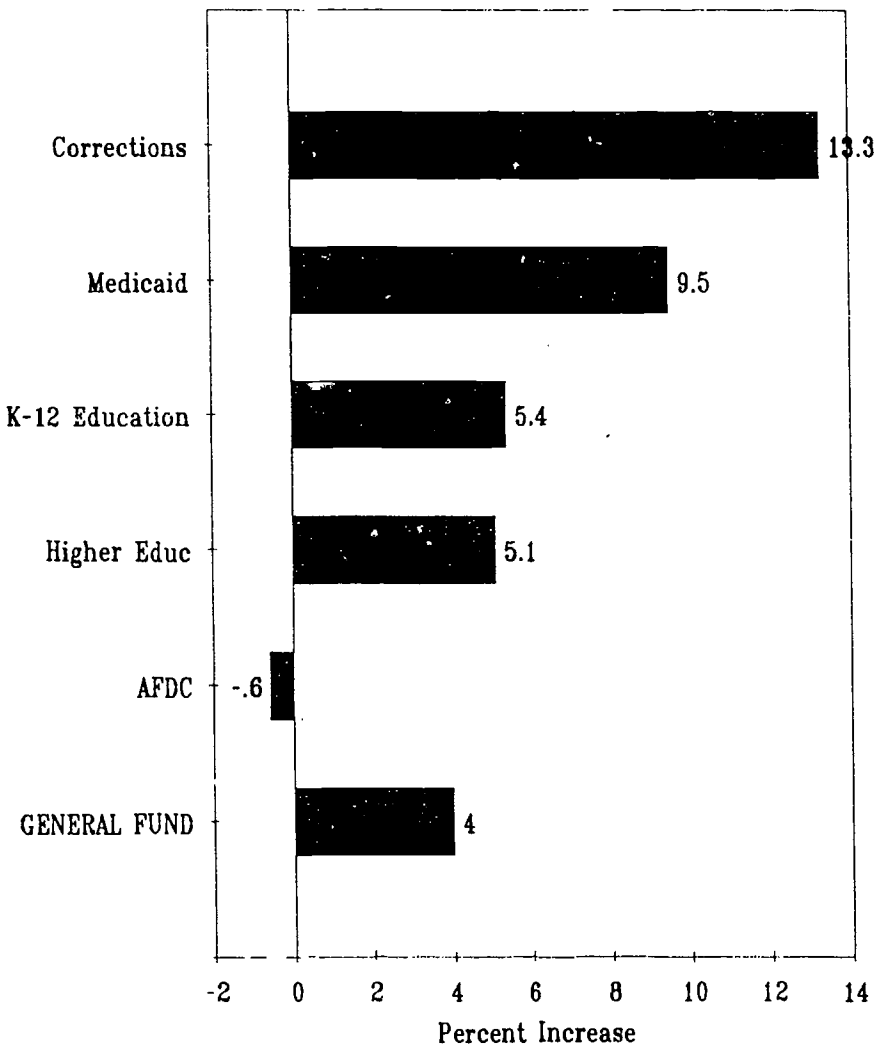
First we revisit fiscal year 1995 because among the 34 reporting states, higher education had an especially difficult year.

Original appropriations from state general funds increased by 4.4 percent in FY1995 over FY1994. However, improved economic conditions in the states and increased state tax revenues that resulted led to supplemental appropriations and rates of actual expenditure growth that were greater than original appropriations. Except for higher education.

- *General fund appropriations* were originally budgeted to increase by 4.4 percent. However, actual expenditures increased by 6.2 percent for FY1995 over FY1994.
- *Corrections* was budgeted for a 7.1 percent increase, but ended up with an 11.1 percent increase.
- *Medicaid* was budgeted for a 7.2 percent increase, but actual expenditures increased by 10.0 percent.
- *K-12 education* started out with a 4.7 percent increase, and ended up with a 7.5 percent increase.
- Even *Aid to Families with Dependent Children*, which is clearly ranking low in state appropriations, ended up with a 2.8 percent increase after starting out the fiscal year with a 1.8 percent increase.

Higher education uniquely was cut from its initial appropriation. Higher education started out with a 3.7 percent increase in appropriation, but ended up with a 2.3 percent increase in actual expenditures for FY1995 compared to FY1994.

Growth in General Fund Appropriations
FY1995 to FY1996

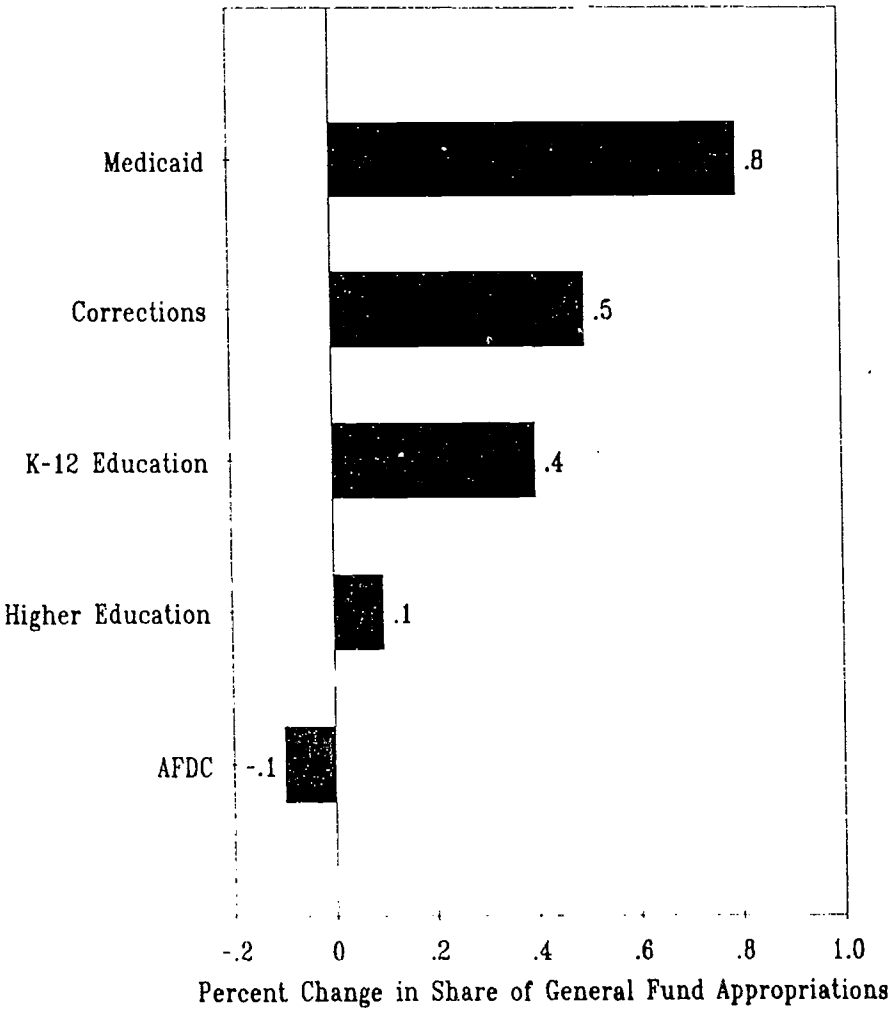


FY995 to FY1996

The NCSL reports that:

> *State fiscal conditions as states enter Fiscal Year 1996 are the best they have been since the early 1980s. Revenues for the previous fiscal year (which for most states ended on June 30, 1995) covered budgets and*

Changes in Shares of General Funds Appropriated for Major Areas of State Spending FY1995 to FY1996



supplemental appropriations, increased state reserves to their highest level since 1980, and permitted the largest tax cuts in a decade.

The preliminary results indicate that higher education's share of state budgets is *likely* to increase in FY1996 compared to FY1995. While total general funds appropriations increased by 4.0 percent between FY1995 and FY1996, higher education appropriations increased by 5.1 percent. This was fa less than the increase in appropriations for corrections (+13.3%) and Medicaid (+9.5%). But higher education's share of state general fund appropriations is projected to increase slightly, from 12.0 percent in FY1995 to 12.1 percent in FY1996.

Among the 34 reporting states, the states with increases in higher education appropriations greater than the average for the 34 reporting states were:

Nevada	11.0%
Georgia	9.3%
Florida	8.2%
Colorado	7.4%
Ohio	7.4%
Arkansas	7.3%
Pennsylvania	7.1%
Texas	6.4%
Utah	6.1%
Vermont	5.2%

Higher education's main competitors for state funds continue to be corrections and Medicaid (health care for the poor). In corrections, funding growth was used to staff newly-constructed and planned facilities, but does not include capital costs for new prisons. Four states increased state general fund appropriations for corrections by more than 25 percent in FY1996 over FY1995:

Florida	50.2%
Montana	28.9%
Vermont	28.3%
Mississippi	27.6%

Other states with above average increases were Utah, Minnesota, Wisconsin, Ohio, Nevada, Arizona, Texas and Nebraska.

The other budget priority in the states is Medicaid. Changes in the ways states finance Medicaid account for some of the observed changes between FY1995 and FY1996. The states with the largest Medicaid increases are:

Mississippi	30.1%
Idaho	21.1%
Florida	15.0%
Arkansas	13.5%
Texas	13.0%
Nebraska	12.2%

Tax Changes

States also used these relatively prosperous times to reduce most taxes and increase a few. Counted as expenditures, major local property tax relief was provided by state appropriations in Utah, South Carolina, Idaho and South Dakota where state tax resources were used to replace local property taxes used in K-12 school finance.

Net changes in state taxes (in millions)

enacted in 1995 for FY1996 were as follows:

Personal income	$-839.3
Corporate income	-488.0
Sales and use	-52.7
Motor fuel/excise	-52.8
Cigarette/tobacco	+162.1
Alcoholic beverage	-0.2
Health care related	+767.0
Other	-164.1
Net change	$-668.0

Adding previously authorized tax reductions, total state tax revenues will be reduced by $2.4 billion in FY1996.

Summary and Conclusions

The preliminary report on FY1996 state budget and tax actions by the National Conference of State Legislatures offers no encouragement to those concerned about public finance of higher education. As a budget priority, higher education ranks far behind corrections and Medicaid, and well behind K-12 education, property tax relief, and personal and corporate income tax reduction.

About all that higher education ranks ahead of is AFDC, and this appears to be primarily the result of economic prosperity, low unemployment and resulting low AFDC caseloads.

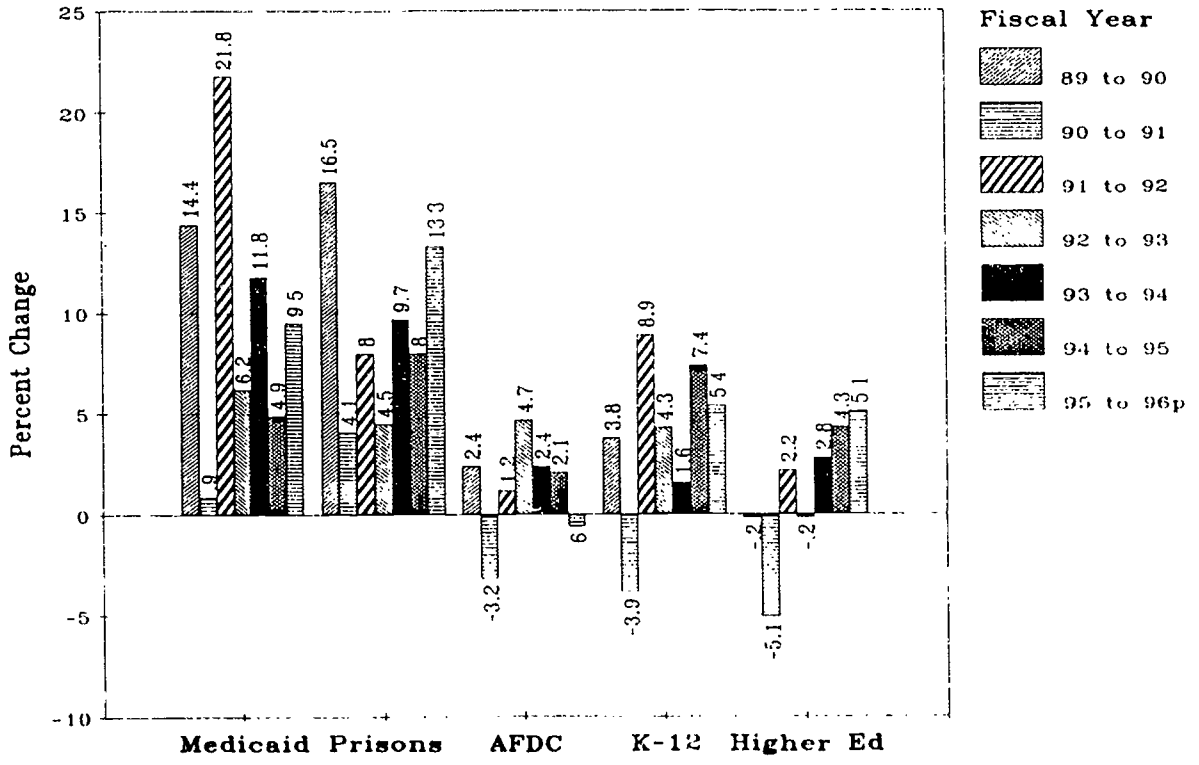
The FY1996 priority for higher education in state budgeting has now persisted for more than 15 years. No one can reasonably hope that higher education's low state budget priority is merely a cyclical fluctuation, and that as soon as the economy recovers states will restore public higher education's eroded state funding support. During economic expansion and recession, for 16 years, higher education's priority in state budgeting has steadily and broadly eroded.

The challenge of meeting the labor market's need for more and better educated and trained workers remains to be addressed in this context of deteriorating state funding for higher education.

This has been the challenge for more than 15 years. Still, it persists. The accumulated human capital damage is reflected in the rapidly growing social program costs of corrections and Medicaid.

The old saw still holds: pay now or pay later, but inevitably society will pay for the education of its citizens. The bill for past failures is now reflected in these new state budget priorities for corrections and Medicaid.

Annual Changes in Major Expenditure Categories
from State General Funds
FY1990 to FY1996p



Targeting state investments . . . *. . . on needy students*

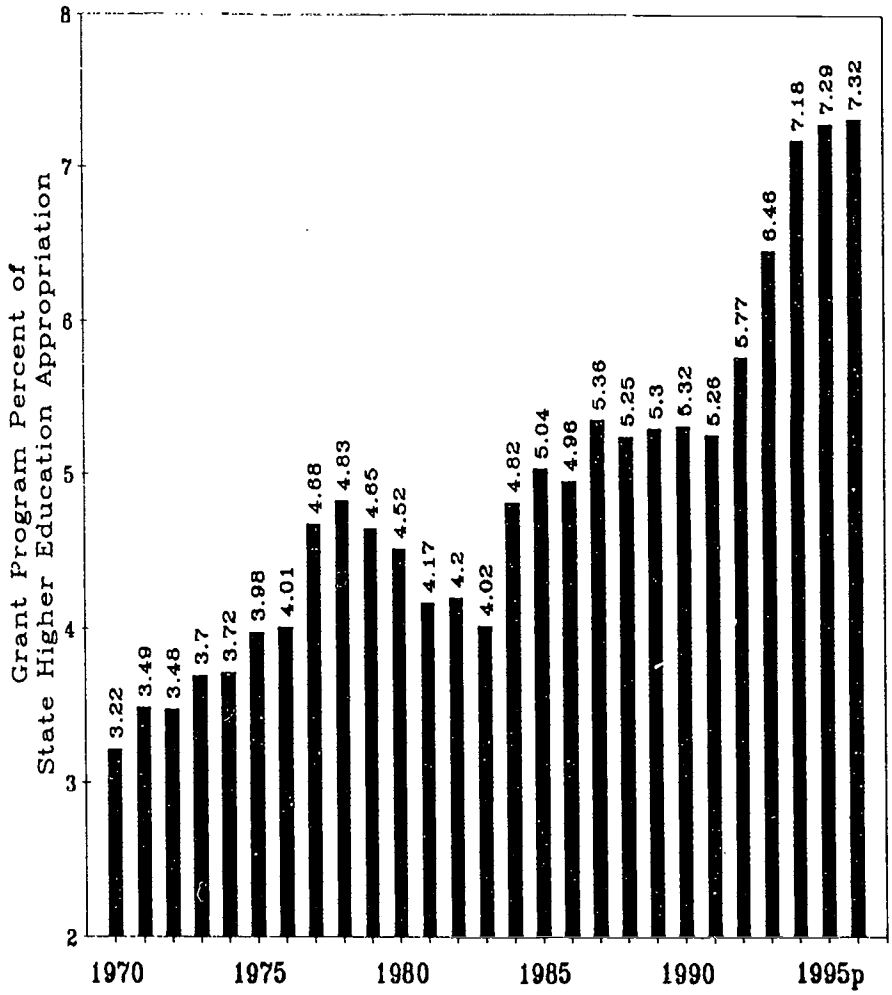
State Appropriations for Need-Based Undergraduate Grant Programs, FY1994 to FY1996

State grant programs provide more than $2.9 billion in financial aid to more than 1,850,000 undergraduate and graduate students. Compared to the federal Pell Grant Program, the sum of these programs is not large. But don't tell that to the students that receive and rely on state grants to help finance their higher educations. These grants can and do enable many students to enter and persist in higher educational studies through to degrees and careers that would not otherwise be available to them.

Nearly all state grant programs are need-tested and available only to undergraduate students. In FY1994--the most recent year with complete survey data available--89 percent of the dollars provided through state grant programs went to undergraduate students on the basis of demonstrated financial need.

Most of these programs are available to undergraduates in both public and private institutions. But a few are targeted on needy students in private institutions to help finance the price difference caused by state-subsidized public higher education compared to private institutions not receiving state subsidies. An even smaller number are limited to needy students in public institutions.

State Grant Program Appropriations as a Proportion of State Appropriations for Higher Education FY1970 to FY1996p



Here we report the results of our preliminary survey of state funding for need-tested undergraduate grant programs. This survey was sent to state agencies with programs larger than $5 million per year.

Surveys were sent to 33 states. Replies were received from 27 states during the first week of response. Several very large state grant programs are not included in this tabulation: New Jersey, Georgia, Michigan, Florida, Colorado and Vermont. The following summarizes the reports received from the state agencies administering these programs.

Summary Data

The 27 responding states submitted data on 34 different state grant programs. These states and their programs are identified in the table on the following page. These programs comprise 75 percent of all dollars awarded to undergraduates through state need-based grant programs.

For FY1996 the state agencies administering these programs estimated that 1,248,210 students will

FY1996 State Need-Based Undergraduate Grant Program Preliminary Survey

State	Undergraduate Grant Program	1993-94 Awards	1993-94 Payout (000)	1993-94 Mean Award	1993-94 Maximum Award	1994-95 Awards	1994-95 Payout (000)	1994-95 Mean Award	1994-95 Maximum Award	1995-96 Awards	1995-96 Payout (000)	1995-96 Mean Award	1995-96 Maximum Award	Percent Change FY95 to FY96 Awards	Percent Change FY95 to FY96 Payout
All Undergraduates Eligible															
New York	Tuition Assistance Program	294,[illegible]	$606,849	$2,064	$4,050	298,000	$615,780	$2,066	$4,050	299,000	$584,200	$1,954	$3,900	0.3%	-5.1%
Illinois	Monetary Award Program	119,000	$213,209	$1,792	$3,500	127,219	$239,684	$1,884	$3,800	127,740	$254,172	$1,990	$3,900	0.4%	6.0%
Pennsylvania	State Grants	32,441	$188,750	$1,[illegible]	$2,500	136,398	$210,742	$1,545	$2,600	143,000	$229,986	$1,608	$2,632	4.8%	9.1%
California	Cal Grant A Program	43,[illegible]	$142,154	$3,[illegible]	$5,250	44,625	$156,323	$3,503	$5,250	45,701	$159,714	$3,495	$5,250	2.4%	2.2%
Minnesota	State Grant Program	72,644	$95,660	$1,317	$5,889	70,939	$93,880	$1,323	$5,889	71,000	$96,000	$1,352	$5,890	0.1%	2.3%
Ohio	Instructional Grants	80,000	$74,000	$925	$3,606	85,000	$80,000	$941	$3,750	85,000	$85,000	$1,000	$3,750	0.0%	6.3%
California	Cal Grant B Program	33,0[illegible]	$72,440	$2,191	$6,660	32,734	$73,621	$2,249	$6,660	32,734	$73,187	$2,236	$6,660	0.0%	-0.6%
Indiana	Higher Ed/Freedom of Choice	55,[illegible]	$55,414	$992		56,792	$63,195	$1,113	$4,106	56,850	$68,100	$1,198	$4,680	0.1%	7.8%
Washington	State Need Grants	38,000	$45,950	$1,209	$2,625	38,000	$53,000	$1,395	$2,740	40,000	$56,300	$1,408	$2,805	5.3%	6.2%
Massachusetts	General Scholarships	32,600	$34,309	$1,052	$2,500	33,500	$35,300	$1,[illegible]	$2,500	32,000	$34,200	$1,069	$2,500	-4.5%	-3.1%
Kentucky	College Access Program	17,440	$12,630	$724	$840	21,400	$17,217	$[illegible]	$960	24,160	$19,884	$823	$980	12.9%	15.5%
Tennessee	Student Assistance Awards	19,497	$15,712	$806	$1,482	21,672	$18,261	$843	$2,322	22,000	$19,607	$891	$2,682	1.5%	7.4%
Maryland	Educational Assistance Grant	0	$0	$0	$0	0	$0	$0	$0	12,350	$18,685	$1,513	$3,000	0.0%	0.0%
New York	Part Time Study	22,337	$12,000	$537	$2,000	27,000	$14,630	$542	$2,000	27,000	$14,630	$542	$2,000	0.0%	0.0%
Oregon	Need/Supplemental Grant Prog	13,260	$12,165	$917	$3,150	14,380	$13,634	$948	$3,180	13,000	$14,300	$1,100	$2,860	-9.6%	4.9%
Oklahoma	Tuition Aid Grants	16,849	$13,350	$792	$1,000	16,850	$13,350	$792	$1,000	16,850	$13,350	$792	$1,000	0.0%	0.0%
Missouri	Student Grants	8,779	$11,075	$1,262	$1,500	9,184	$11,855	$1,291	$1,500	9,420	$12,155	$1,290	$1,500	2.6%	2.5%
West Virginia	Higher Education Grant Progr	4,766	$5,836	$1,225	$1,968	5,330	$6,597	$1,238	$1,944	5,784	$8,351	$1,444	$2,136	8.5%	26.6%
New Mexico	Incentive Grants	9,613	$6,444	$670	$2,500	10,382	$7,033	$677	$2,500	11,212	$7,933	$708	$2,500	8.0%	12.8%
Maine	Incentive Grants	9,500	$5,170	$544	$1,000	10,360	$5,787	$559	$1,000	12,000	$7,100	$592	$1,000	15.8%	22.7%
Rhode Island	Scholarship & Grant Program	13,700	$6,500	$474	$1,000	11,900	$6,300	$529	$900	12,000	$6,500	$542	$700	0.8%	3.2%
Maryland	Senatorial Scholarships	8,598	$6,596	$767	$2,000	7,745	$6,784	$876	$2,000	8,159	$6,486	$795	$2,000	5.3%	-4.4%
Virginia	College Scholarship Assistan	7,955	$5,853	$736	$2,000	8,000	$5,787	$723	$5,000	8,000	$5,800	$725	$5,000	0.0%	0.2%
Maryland	Guaranteed Access Grant	0	$0	$0	$0	0	$0	$0	$0	929	$4,937	$5,314	$6,000	0.0%	0.0%
Maryland	General State Scholarships	13,000	$16,161	$1,243	$2,500	15,497	$18,268	$1,179	$2,500	0	$0	$0	$0	-100.0%	-100.0%
Subtotal		1,066,090	$1,658,227	$1,555		1,102,907	$1,767,028	$1,602		1,115,889	$1,800,577	$1,614		1.2%	1.9%
Percent of Total		89.7%	91.6%			89.9%	91.7%			89.4%	90.9%				
Private Undergraduates Eligible															
Texas	Tuition Equalization Grants	17,240	$25,200	$1,462	$2,343	17,475	$26,164	$1,497	$2,565	25,100	$37,170	$1,481	$2,640	43.7%	42.1%
Iowa	Tuition Grant Program	14,323	$31,524	$2,201	$2,600	14,447	$32,233	$2,231	$2,650	14,410	$35,665	$2,475	$2,900	-0.3%	10.6%
South Carolina	Tuition Grants	8,375	$16,097	$1,922	$2,890	8,500	$16,442	$1,934	$3,030	9,178	$18,950	$2,065	$3,260	8.0%	15.3%
Wisconsin	Tuition Grants	8,841	$16,333	$1,847	$2,172	8,889	$16,157	$1,818	$2,172	8,650	$16,050	$1,855	$2,172	-2.7%	-0.7%
No Carolina	State Contractual Scholarshi	8,467	$11,235	$1,324		8,885	$13,467	$1,516		8,885	$13,774	$1,550		0.0%	2.3%
Connecticut	Ind Col Student Grants	3,718	$12,055	$3,242	$6,700	3,718	$12,055	$3,242	$6,700	3,718	$12,055	$3,242	$6,700	0.0%	0.0%
Kentucky	Tuition Grant Program	6,360	$7,081	$1,113	$1,200	7,700	$8,300	$1,078	$1,200	6,130	$8,270	$1,349	$1,500	-20.4%	-0.4%
Subtotal		67,344	$119,525	$1,775		69,612	$124,818	$1,793		76,071	$141,934	$1,866		9.3%	13.7%
Percent of Total		5.7%	6.6%			5.7%	6.5%			6.1%	7.2%				
Public Undergraduates Eligible															
Wisconsin	Higher Education Grants	42,366	$23,252	$549	$1,800	41,708	$25,238	$605	$1,800	42,000	$25,146	$599	$1,800	0.7%	-0.4%
Massachusetts	Cash Grants	13,000	$10,000	$769 Tuition		13,000	$10,000	$769 Tuition		14,250	$12,600	$884 Tuition		9.6%	26.0%
Subtotal		55,366	$33,252	$601		54,708	$35,238	$644		56,250	$37,746	$671		2.8%	7.1%
Percent of Total		4.7%	1.8%			4.5%	1.8%			4.5%	1.9%				
TOTAL		1,188,800	$1,811,004	$1,523		1,227,227	$1,927,084	$1,570		1,248,210	$1,880,257	$1,586		1.7%	2.8%

receive $1,980,257,000 in grant and scholarship assistance. This is an average of $1586 per student, with awards ranging up to a maximum of $6700 in **Connecticut's** Independent College Student Grant Program.

Between FY1995 and FY1996, the number of awards is projected to increase by 1.7 percent, and funding by 2.8 percent. The largest rate of growth in award recipients will be in the **Texas** Tuition Equalization Grants (+43.7%), **Maine** Incentive Grants (+15.8%) and **Kentucky** College Access Grants (+12.9%). The largest rate of growth in grant program funding is in the **Texas** Tuition Equalization Grants (+42.1%), **West Virginia** Higher Education Grant Program, **Maine** Incentive Grant Program (+22.7%), **Kentucky** College Access Program (+15.5%) and **South Carolina** Tuition Grants Program (+15.3%).

State Reports

New York: The largest state grant program in the U.S. is the Tuition Assistance Program. This program received a $31.6 million funding cut for FY96. As a result TAP awards will cover only 90 percent of tuition at public institutions rather than 100 percent as was the case until this year.

Pennsylvania: State Grants program eligibility was expanded with changes made in the awarding formula. This resulted in a significant expansion in the part-time cohort which was first added to the program in 1994-95.

California: Eligibility criteria have been revised in an attempt to better target awards to applicants with the greatest financial need and to maintain or lower GPA cutoffs used as selection criteria. Minimum need for Cal Grant A Program was increased by $1500.

Ohio: The income cap for Instructional Grants was moved from $28,000 to $29,000. Schools with default rates greater than 30 percent are not eligible.

Massachusetts: Anticipate changes in 1996-97 due to recommendations from a 1995 task force report.

Maryland: General State Scholarships were replaced by the Educational Excellence Award program, which consists of two components: Educational Assistance Grant and Guaranteed Access Grant.

Oregon: Maximum awards for independent college students decreased. However, legislature created new Supplemental Grant Program for these students.

Postsecondary Education
OPPORTUNITY

The Mortenson Research Letter on Public Policy Analysis of Opportunity for Postsecondary Education

Number 40 **Iowa City, Iowa** **October 1995**

Some do it better . . . *. . . Some do it worse*

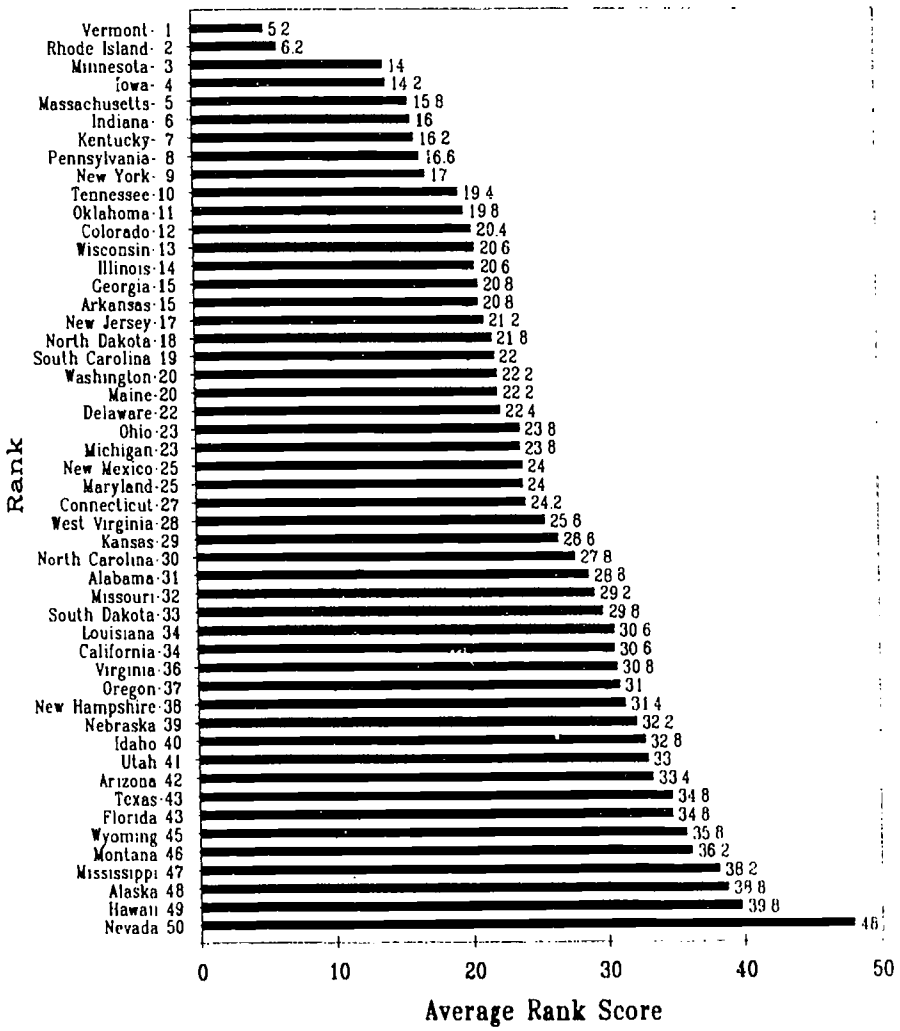
Ranking the States: Outreach Efforts to Low Income Students

This analysis reviews five measures of state efforts to extend higher education opportunity to students from low income family backgrounds. These rankings of the states on these five measures are averaged into a single average rank score shown to the right. The lowest average rank score indicates greatest state outreach efforts to students from low income family backgrounds, and the highest average rank score indicates the weakest state outreach efforts.

Responsibility for providing educational opportunity to students has been shared between the federal and state governments for the last twenty-five years.

- *The states have built and operated colleges, universities and other postsecondary institutions, supported them through annual appropriations, and provided some direct assistance to students demonstrating financial need and/or attending private institutions.*
- *The federal government has augmented state efforts with financial aid generally targeted on financially needy students.*
- *Students and their families have filled in the balance of the funding through tuition and fee charges.*

State Average Rank Score for Outreach to Students from Low Income Family Backgrounds 1993-94



During the last fifteen years, both the states and federal governments have retreated from their historic commitments to finance higher education opportunity. The states have sharply reduced financial investments in the higher education of state citizens, choosing instead to divert resources previously committed to higher education to other state budget priorities, usually corrections and Medicaid. Public institutions

dependent on state appropriations have offset the loss of diverted state funding by increasing tuition, fee, and other charges to the students they enroll, and raising admissions requirements to block out other students that they cannot enroll.

The federal government has also diverted monies previously committed to financial aid for needy students to other program purposes such as financing the federal debt. The effect in financial aid has been to replace grant assistance with loans, and to make these loans steadily less expensive to the federal government by passing their costs on to financial aid recipients with higher interest rates and higher borrowing fees. Further cost shifting to students and now to the institutions where educational loan recipients enroll is under active consideration in Congress as a part of the federal effort to reduce federal expenditures and provide a tax reduction to those who pay federal taxes.

Here we examine the record of the states to reach out and extend higher educational opportunity to students from low income family backgrounds. These students have always had the most difficult time overcoming the large and growing financial barriers to college access, choice, persistence and degree attainment. Their more affluent colleagues appear to be doing far better in graduating from college with the education, training and certification that prepare and qualify them for the best paying jobs in the American labor force.

Students from low income families have stumbled badly over these rising barriers to college graduation during the last 15 years. In 1979 a student from the top quartile of family income was about four times more likely than a student from the bottom quartile of family income to earn a baccalaureate degree by age 24. By 1993 the top quartile student was 13 times more likely. This disparity has grown steadily over the last 15 years as taxpayers everywhere and at all levels of government have shirked their historic commitment to provide the financial resources to educate the next generation on some equitable basis.

The Analysis

In this analysis we examine and summarize five measures of state outreach efforts to students from low income backgrounds in their state. Our purpose is to assess state interest in and commitment to extending higher educational opportunity to its citizens with the fewest resources to pursue higher education.

Each of these five measures has appeared in an earlier version in past issues of OPPORTUNITY. All data are for the 1993-94 academic and fiscal year. The data used in each rating for each state are shown, as is their source, for those wishing to pursue these analyses further. (We hope many states choose to do so.)

The five measures of state outreach efforts to students from low income family backgrounds are:

1. Percent of state tax funds for higher education for state need-based student financial aid.
2. State Student Incentive Grant program matching funds provided by the state.
3. State grant program coverage of each state's most needy undergraduate students.
4. Pell Grant recipient net migration rates.
5. TRIO program outreach efforts.

Each of these five measures reflects specific state efforts to extend opportunity for higher education to their state citizens from low income family backgrounds.

These measures are intended to be

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Mission Statement

This research letter is founded on two fundamental beliefs. First, sound public social policy requires accurate, current, independent, and focused information on the human condition. Second, education is essential to the development of human potential and resources for both private and public benefit. Therefore, the purpose of this research letter is to inform those who formulate, fund, and administer public policy and programs about the condition of and influences that affect postsecondary education opportunity for all Americans.

instructive, constructive and reflective of what is happening in the states. They are imperfect, some more than others, due largely to incomplete or incomparable data between states. Where our measure is known to understate state efforts to extend educational opportunity, we explain why, even though our available data do not permit a correction in such limitations where they exist.

Indicator #1:
Percent of state tax fund appropriations for state need-based student financial aid

State appropriations to institutions that result in uniform tuition charges to all students are inherently inefficient and ineffective. Too much state assistance goes to some students from affluent families, while inadequate financial assistance goes to others from families with limited resources to pay college attendance costs.

All states have recognized and addressed this problem by shifting a portion of their state funding for higher education into state need-based grant programs. In 1993-94, 5.4 percent of all state funding for higher education passed through state need-based grant programs.

But some states have targeted a larger share of state higher education funding on financially needy students than have other states. In 1993-94 **New York** provided $21.42 per $100 of state tax fund appropriations for higher education to financially needy students through its Tuition Assistance Program (TAP). Only ten states provided more than the national average.

At the other extreme, **Wyoming** and **Hawaii** provided just $.20 per $100 of state higher education funding to needy students through their state grant programs. Many other states spend nearly as little to help needy students finance their higher educations.

Indicator 1:
Percent of State Tax Fund Appropriations for State Need-Based Grant Program Aid FY1994

Rk	State	Need-Based Grant Aid (000)	State Tax Fund Approps (000)	Percent for Need-Based Grant Aid
1	New York	$631,234	$2,947,227	21.42%
2	Vermont	11,314	54,016	20.95%
3	Pennsylvania	188,751	1,513,260	12.47%
4	Illinois	214,809	1,806,826	11.89%
5	New Jersey	135,734	1,245,276	10.90%
6	Minnesota	102,920	1,008,028	10.21%
7	Indiana	55,814	918,132	6.08%
8	Rhode Island	6,500	112,358	5.79%
9	Iowa	34,718	622,094	5.58%
10	Massachusetts	45,059	826,995	5.45%
11	Michigan	82,945	1,546,950	5.36%
12	Ohio	77,940	1,471,558	5.30%
13	Wisconsin	46,608	936,156	4.98%
14	Washington	46,620	954,583	4.88%
15	California	210,106	4,384,452	4.79%
16	Connecticut	20,641	494,937	4.17%
17	Colorado	17,492	534,418	3.27%
18	Kentucky	20,619	630,650	3.27%
19	Maryland	24,012	751,084	3.20%
20	Oregon	12,903	428,099	3.01%
21	Maine	5,170	172,451	3.00%
22	South Carolina	16,795	594,147	2.83%
23	Oklahoma	15,021	538,565	2.79%
24	Georgia	26,853	1,034,858	2.59%
25	New Mexico	9,888	393,353	2.51%
26	Tennessee	16,755	802,957	2.09%
27	Florida	31,289	1,576,041	1.99%
28	West Virginia	5,802	297,074	1.95%
29	Kansas	9,060	477,484	1.90%
30	Arkansas	7,701	413,466	1.86%
31	Missouri	11,124	610,670	1.82%
32	North Dakota	2,036	143,699	1.42%
33	Delaware	1,437	125,969	1.14%
34	Louisiana	6,374	567,580	1.12%
35	New Hampshire	841	80,415	1.05%
36	North Carolina	15,586	1,630,179	0.96%
37	Texas	29,102	3,188,362	0.91%
38	Nebraska	2,686	358,249	0.75%
39	Virginia	6,408	949,548	0.67%
40	Arizona	3,504	616,917	0.57%
41	South Dakota	589	112,006	0.53%
42	Idaho	750	201,334	0.37%
43	Montana	401	116,982	0.34%
44	Utah	1,132	363,668	0.31%
45	Mississippi	1,255	458,989	0.27%
46	Alabama	2,325	892,127	0.26%
47	Alaska	454	179,818	0.25%
48	Nevada	402	194,219	0.21%
49	Hawaii	748	371,336	0.20%
50	Wyoming	250	125,954	0.20%
	TOTAL	$2,218,477	$40,775,516	5.44%

The data used for Indicator #1 come from two sources. The state financial aid data are reported each year by the National Association of State Scholarship and Grant Programs. The State tax fund appropriations to higher education are collected by Illinois State University and published by the State Higher Education Executive Officers.

Indicator #2:
Percent of state grant program funds provided through State Student Incentive Grant program match

The federal SSIG program was created to encourage states to establish and expand state student financial aid programs. As a result, those states that did not previously have state student aid programs now all have them.

However, SSIG matching funding plays roles of different scales in different state grant programs. At one extreme in **New York** federal SSIG funding amounts to less than 1 percent of state grant funding available to students. At the other extreme in **Wyoming** and **Montana** states provide only the absolute minimum state funding to qualify for the federal SSIG matching funding. Nationally, federal SSIG dollars amount to 3.2 percent of state grant program funding.

Those states that are closest to or at the minimum 50/50 matched funding for their state grant programs are least committed to providing need-based grants to their students. Other states in which SSIG plays a small role in state grant funding are committed to funding their needy students, with or without federal SSIG funding.

Data for this analysis were collected and reported by the National Association of State Scholarship and Grant Programs in their annual survey for the 1993-94 academic and fiscal year.

Indicator 2:
Percent of State Need-Based Aid Provided by Federal SSIG FY1994

Rk	State	Need-Based Grant Aid (000)	SSIG Amount (000)	SSIG as a Percent of Need-Based
1	New York	631,234	6,154	0.97%
2	Minnesota	102,920	1,408	1.37%
3	New Jersey	136,734	1,910	1.40%
4	Vermont	11,315	181	1.60%
5	Iowa	34,718	560	1.61%
6	Pennsylvania	188,751	3,200	1.70%
7	Illinois	214,809	4,200	1.96%
8	Indiana	55,814	1,448	2.59%
9	Washington	46,620	1,303	2.79%
10	Wisconsin	46,607	1,518	3.26%
11	Michigan	82,946	3,010	3.63%
12	Ohio	77,940	2,887	3.70%
13	New Mexico	9,888	370	3.74%
14	Rhode Island*	9,586	380	3.96%
15	Kentucky	20,619	889	4.31%
16	Connecticut	20,640	943	4.57%
17	South Carolina	16,795	788	4.69%
18	Georgia	26,853	1,264	4.71%
19	Maine	5,170	261	5.05%
20	Massachusetts	45,059	2,341	5.20%
21	California	210,106	11,186	5.32%
22	Maryland	24,013	1,328	5.53%
23	Colorado	17,492	988	5.65%
24	Arkansas	7,701	461	5.98%
25	Oklahoma	15,022	980	6.53%
26	Tennessee	16,755	1,179	7.04%
27	Oregon	12,903	935	7.25%
28	Florida	31,289	2,279	7.28%
29	Kansas	9,060	807	8.91%
30	West Virginia	5,802	529	9.11%
31	North Dakota	2,036	195	9.58%
32	North Carolina	15,587	1,581	10.14%
33	Texas	31,538	3,948	12.52%
34	Missouri	11,124	1,439	12.93%
35	Delaware	1,437	194	13.52%
36	Louisiana	6,374	1,025	16.08%
37	Nebraska	2,687	522	19.43%
38	Virginia	6,408	1,551	24.20%
39	Alaska	454	116	25.49%
40	New Hampshire	841	254	30.19%
41	Idaho	750	244	32.52%
42	Arizona	3,504	1,221	34.84%
43	South Dakota	589	207	35.07%
44	Hawaii	748	297	39.76%
45	Alabama	2,325	1,083	46.59%
46	Utah	1,132	541	47.79%
47	Mississippi	1,255	616	49.11%
48	Nevada	402	197	49.15%
49	Montana	401	201	50.00%
50	Wyoming	250	125	50.00%
	TOTAL	2,224,999	71,241	3.20%

*1992-93 data used.

Indicator #3: State Grant Coverage of Most Needy Undergraduate Students

The federal Pell Grant program provides grants to the most needy undergraduate students in each state. All Pell Grant awards are made under the same criteria in each state. Thus, the number of Pell Grant recipients who are residents of a state establishes the number of most needy undergraduate students from each state. State grant programs then make state grant awards to these (and other) needy undergraduate students under state eligibility criteria. These awards also go to needy students to help them finance the attendance costs for a year at college.

The number of state grant recipients divided by the number of Pell Grant recipients who are residents of that state establishes this measure of state grant coverage of each state's most needy undergraduate population. The results are shown in the table to the right. State grant coverage of the resident Pell Grant recipient population ranges from 170 percent in **Vermont** to 4 percent in **Mississippi**. That is, Vermont provides grants to many needy Vermonters who demonstrate need but do not qualify for Pell Grants. Mississippi provides state grant assistance to only one Pell Grant recipient in 25.

About 15 states make often substantial state appropriations to public institutions for financial aid awards to needy students. These data are not included here primarily because such awards are not available to all students in such states. These funds are only available to students meeting the institutions' admissions standards which are often quite selective.

State grant recipient data are provided by NASSGP, while Pell Grant recipient data are provided in the *Pell Grant End-of-Year Report* by ED.

Indicator 3: State Grant Coverage of Most Needy Undergraduates FY1994

Rk	State	Pell Recips by Rsdnc	State Grant Recips	State Coverage of Needy Coverage	State Coverage of Needy Percent
1	Vermont	7,961	13,522	5,561	169.85%
2	Rhode Island	12,609	13,700	1,091	108.65%
3	Minnesota	72,193	68,515	-3,678	94.91%
4	Wisconsin	63,276	58,652	-4,624	92.69%
5	Pennsylvania	143,510	132,442	-11,068	92.29%
6	New York	350,548	321,913	-28,635	91.83%
7	New Jersey	79,637	64,350	-15,287	80.80%
8	Illinois	153,583	121,000	-32,583	78.78%
9	Indiana	72,226	56,246	-15,980	77.88%
10	Connecticut	24,567	18,400	-6,167	74.90%
11	Massachusetts	71,121	45,700	-25,421	64.26%
12	Washington	62,456	38,278	-24,178	61.29%
13	Maine	16,131	9,500	-6,631	58.89%
14	Ohio	152,750	80,000	-72,750	52.37%
15	Maryland	49,969	24,811	-25,158	49.65%
16	Michigan	143,424	65,954	-77,470	45.99%
17	Colorado	49,966	22,966	-27,000	45.96%
18	Kentucky	59,068	24,970	-34,098	42.27%
19	Iowa	47,466	19,700	-27,766	41.50%
20	Tennessee	63,865	22,451	-41,414	35.15%
21	Georgia	87,043	30,483	-56,560	35.02%
22	Arkansas	36,363	12,300	-24,063	33.83%
23	Oregon	42,182	14,225	-27,957	33.72%
24	Delaware	5,555	1,575	-3,980	28.35%
25	Oklahoma	60,432	16,875	-43,557	27.92%
26	New Mexico	33,382	8,805	-24,577	26.38%
27	North Dakota	13,382	3,400	-9,982	25.41%
28	Florida	170,210	43,100	-127,110	25.32%
29	Nebraska	28,109	6,970	-21,139	24.80%
30	California	389,316	75,407	-313,909	19.37%
31	South Carolina	49,755	9,100	-40,655	18.29%
32	Kansas	40,076	7,112	-32,964	17.75%
33	West Virginia	25,587	4,421	-21,166	17.28%
34	North Carolina	72,286	11,666	-60,620	16.14%
35	South Dakota	13,718	2,100	-11,618	15.31%
36	Missouri	72,757	9,000	-63,757	12.37%
37	Virginia	67,469	7,800	-59,669	11.56%
38	New Hampshire	10,879	1,186	-9,693	10.90%
39	Hawaii	6,902	700	-6,202	10.14%
40	Idaho	18,676	1,648	-17,028	8.82%
41	Texas	244,451	20,891	-223,560	8.55%
42	Montana	17,168	1,325	-15,843	7.72%
43	Arizona	59,458	4,582	-54,876	7.71%
44	Louisiana	77,455	5,640	-71,815	7.28%
45	Wyoming	8,152	592	-7,560	7.26%
46	Alabama	67,911	4,680	-63,231	6.89%
47	Utah	39,157	2,600	-36,557	6.64%
48	Nevada	10,030	656	-9,374	6.54%
49	Alaska	5,274	315	-4,959	5.97%
50	Mississippi	51,210	2,051	-49,159	4.01%
	TOTAL	3,520,671	1,534,275	-1,986,396	43.58%

Indicator #4:
Pell Grant net migration by state

Federal Pell Grants to eligible students are portable across state lines to qualified public, private non-profit or for-profit postsecondary institutions. Pell Grants are like vouchers in that they follow students.

Because Pell Grants only go to students from low income family backgrounds, observing the migration of recipients between states reflects where these low family income students find postsecondary education opportunity available and attractive.

Some states are net importers of Pell Grant recipients. That is, they attract more Pell Grant recipients to postsecondary institutions in their states than they export to enroll in postsecondary institutions in other states. We find these states to provide relatively attractive conditions for postsecondary opportunity for students from low income family backgrounds.

Other states export more of their resident Pell Grant recipients to other states than they attract from other states. We find these states to provide relatively unattractive postsecondary conditions for students from low income family backgrounds.

We have calculated Pell Grant net migration rates by state in the table to the right. Net migration rates range from +32.2 percent in **Rhode Island** to -13.8 percent in **Maine.** Seven states have Pell Grant net migration rates greater than 10 percent, while three have rates below minus ten percent. Generally, net migration for Pell Grant recipients parallels net migration for other undergraduate enrollment classes.

Data used in this analysis are reported each year by the Department of Education in the *Pell Grant End-of-Year Report*.

Indicator 4:
Pell Grant Net Migration by State
FY1994

Rk	State	State of Institution	State of Residence	Net Pell Grants	Net Migration Rate
1	Rhode Island	16,669	12,609	4,060	32.20%
2	Utah	44,779	39,157	5,622	14.36%
3	Alabama	76,790	67,911	8,879	13.07%
4	Arizona	66,594	59,458	7,136	12.00%
5	Delaware	6,183	5,555	628	11.31%
6	South Dakota	15,172	13,718	1,454	10.60%
7	West Virginia	28,183	25,587	2,596	10.15%
8	Tennessee	70,247	63,865	6,382	9.99%
9	New Hampshire	11,838	10,879	959	8.82%
10	Virginia	73,113	67,469	5,644	8.37%
11	Missouri	78,763	72,757	6,006	8.25%
12	North Dakota	14,470	13,382	1,088	8.13%
13	Massachusetts	76,167	71,121	5,046	7.09%
14	North Carolina	76,993	72,286	4,707	6.51%
15	Kansas	42,658	40,076	2,582	6.44%
16	Vermont	8,445	7,961	484	6.08%
17	Oklahoma	63,620	60,432	3,188	5.28%
18	Kentucky	62,184	59,068	3,116	5.28%
19	Indiana	76,035	72,226	3,809	5.27%
20	Iowa	49,605	47,466	2,139	4.51%
21	Georgia	90,459	87,043	3,416	3.92%
22	Idaho	19,336	18,676	660	3.53%
23	Arkansas	37,436	36,363	1,073	2.95%
24	Nebraska	28,875	28,109	766	2.73%
25	Pennsylvania	147,188	143,510	3,678	2.56%
26	Louisiana	78,939	77,455	1,484	1.92%
27	Minnesota	73,380	72,193	1,187	1.64%
28	Mississippi	51,974	51,210	764	1.49%
29	Colorado	50,518	49,966	552	1.10%
30	South Carolina	50,081	49,755	326	0.66%
31	Washington	62,846	62,456	390	0.62%
32	Wyoming	8,188	8,152	36	0.44%
33	Maryland	50,089	49,969	120	0.24%
34	New York	351,316	350,548	768	0.22%
35	Ohio	152,926	152,750	176	0.12%
36	Texas	243,654	244,451	-797	-0.33%
37	Wisconsin	62,668	63,276	-608	-0.96%
38	Oregon	41,541	42,182	-641	-1.52%
39	California	380,331	389,316	-8,985	-2.31%
40	Michigan	139,564	143,424	-3,860	-2.69%
41	Florida	164,680	170,210	-5,530	-3.25%
42	New Mexico	32,052	33,382	-1,330	-3.98%
43	Connecticut	23,358	24,567	-1,209	-4.92%
44	Illinois	144,595	153,583	-8,988	-5.85%
45	Hawaii	6,497	6,902	-405	-5.87%
46	Montana	15,889	17,168	-1,279	-7.45%
47	Nevada	9,132	10,030	-898	-8.95%
48	Alaska	4,649	5,274	-625	-11.85%
49	New Jersey	69,515	79,637	-10,122	-12.71%
50	Maine	13,911	16,131	-2,220	-13.76%
	TOTAL	3,564,095	3,520,671	43,424	1.23%

Indicator #5
TRIO Outreach Efforts

The five federal TRIO programs provide outreach and supportive services to students that are from low income and first generation family backgrounds. These five programs are: Upward Bound, Talent Search, Educational Opportunity Centers, Student Support Services and McNair Post-baccalaureate. They are authorized under Title IV of the Higher Education Act.

TRIO programs exist in all states. TRIO program awards are made on a competitive basis based on proposals submitted by institutions and other organizations within each state. Successful bidders reflect special commitments to outreach and supportive services within the states.

We measure--crudely, we admit--state outreach efforts to students from low income/first generation family backgrounds by dividing the number of students enrolled in the five TRIO programs by the number of undergraduates enrolled in higher education in each state. We then rank states by this enrollment ratio, as shown at right. TRIO enrollment rates range from 19.1 percent in **Montana** to 1.9 percent in **Florida**.

TRIO data used in this analysis were compiled by the National Council of Educational Opportunity Associations. Undergraduate enrollment data were compiled and published by the National Center for Education Statistics.

We frankly admit to the omission of very important state- and privately-created, designed and operated outreach and supportive programs that parallel the federal TRIO programs. We do not have data to include them here, but wish we did on a comparable basis with TRIO enrollment data. States that operate major outreach

Indicator 5:
TRIO Outreach Efforts by State
FY1994

Rk	State	TRIO Students Served	Higher Education Undergrad	TRIO % of Enroll
1	Montana	6,955	36,198	19.21%
2	Wyoming	4,666	28,791	16.21%
3	Vermont	5,150	32,113	16.04%
4	Alabama	32,093	206,607	15.53%
5	Arkansas	12,772	88,393	14.45%
6	Rhode Island	8,980	69,364	12.95%
7	North Dakota	4,425	37,307	11.86%
8	Maine	5,850	52,059	11.24%
9	Oklahoma	17,390	155,758	11.16%
10	South Carolina	16,030	148,044	10.83%
11	Alaska	3,100	29,349	10.56%
12	Kentucky	17,118	164,788	10.39%
13	Louisiana	16,028	173,861	9.22%
14	New Mexico	7,311	85,622	8.54%
15	Delaware	3,155	37,538	8.40%
16	Colorado	16,895	201,588	8.38%
17	Tennessee	17,825	213,672	8.34%
18	Iowa	12,805	155,054	8.26%
19	Idaho	4,030	50,003	8.06%
20	Georgia	20,140	251,253	8.02%
21	Mississippi	7,851	111,510	7.04%
22	Hawaii	3,340	53,012	6.30%
23	North Carolina	20,079	345,470	5.81%
24	South Dakota	1,835	32,788	5.60%
25	Massachusetts	18,480	334,873	5.52%
26	Utah	6,040	122,208	4.94%
27	Texas	40,129	820,888	4.89%
28	Kansas	7,045	147,725	4.77%
29	West Virginia	3,605	76,817	4.69%
30	Virginia	14,080	302,927	4.65%
31	Maryland	10,074	224,927	4.48%
32	Minnesota	10,440	237,535	4.40%
33	Nebraska	4,614	107,851	4.28%
34	Missouri	10,483	252,028	4.16%
35	New Hampshire	2,210	54,534	4.05%
36	Connecticut	5,099	131,462	3.88%
37	Indiana	9,841	258,714	3.80%
38	Arizona	9,143	244,028	3.75%
39	Wisconsin	9,321	273,254	3.41%
40	Illinois	20,833	637,524	3.27%
41	Michigan	15,465	489,014	3.16%
42	New Jersey	9,018	292,404	3.08%
43	New York	26,037	870,789	2.99%
44	Pennsylvania	15,939	533,593	2.99%
45	Washington	6,741	251,058	2.69%
46	Ohio	12,907	495,892	2.60%
47	Oregon	3,715	146,778	2.53%
48	California	39,129	1,764,876	2.22%
49	Nevada	1,265	57,512	2.20%
50	Florida	10,390	552,553	1.88%
	TOTAL	629,415	12,539,820	5.02%

programs involving counseling services include **Rhode Island, Indiana, Hawaii, Oklahoma, Virginia, North Carolina, New York, Maryland** and **Kentucky**. In addition, a number of community outreach programs have recently organized the **National College Access Network**. None of their efforts are included in this analysis.

Averaging State Rank Scores

The table to the right averages the ranks for each state and re-ranks the states on the five outreach measures used in this analysis. This table appears in chart form on the first page of this issue of OPPORTUNITY.

Vermont and **Rhode Island** clearly lead the states in outreach efforts to those least well represented in higher education. Each ranks first among the states on one measure and second on another measure.

At the bottom of the ranking is **Nevada**. Nevada owns last place. No other state is even close. Perhaps the best that can be said about Nevada is that the state appears to be clueless. Should Nevada's current prosperity ever falter, Nevada may find it has let pass a window of opportunity to capitalize its human resources when it had the chance to do so.

These data have meaning to states that are concerned about the postsecondary education of their citizens, and especially those from least fortunate family backgrounds. It suggests where their efforts place them compared to other states and areas where efforts could be strengthened.

But these data also appear when Congress is poised to greatly diminish the federal role in ensuring that the most basic of human survival needs are met. Some states are clearly better prepared to address the federal challenge than are others.

Composite Index of State Measures of Educational Opportunity Outreach to Students from Low Income Family Backgrounds FY1994

		Indicator						
Rk	State	1	2	3	4	5	Avg	SD
1	Vermont	2	4	1	16	3	5.2	5.5
2	Rhode Island	8	14	2	1	6	6.2	4.7
3	Minnesota	6	2	3	27	32	14.0	12.8
4	Iowa	9	5	19	20	18	14.2	6.0
5	Massachusetts	10	20	11	13	25	15.8	5.8
6	Indiana	7	8	9	19	37	16.0	11.3
7	Kentucky	18	15	18	18	12	16.2	2.4
8	Pennsylvania	3	6	5	25	44	16.6	15.8
9	New York	1	1	6	34	43	17.0	17.9
10	Tennessee	26	26	20	8	17	19.4	6.7
11	Oklahoma	23	25	25	17	9	19.8	6.1
12	Colorado	17	23	17	29	16	20.4	5.0
13	Wisconsin	13	10	4	37	39	20.6	14.5
13	Illinois	4	7	8	44	40	20.6	17.6
15	Georgia	24	18	21	21	20	20.8	1.9
15	Arkansas	30	24	22	23	5	20.8	8.4
17	New Jersey	5	3	7	49	42	21.2	20.0
18	North Dakota	32	31	27	12	7	21.8	10.3
19	South Carolina	22	17	31	30	10	22.0	7.9
20	Washington	14	9	12	31	45	22.2	13.7
20	Maine	21	19	13	50	8	22.2	14.6
22	Delaware	33	35	24	5	15	22.4	11.2
23	Ohio	12	12	14	35	46	23.8	14.1
23	Michigan	11	11	16	40	41	23.8	13.8
25	New Mexico	25	13	26	42	14	24.0	10.5
25	Maryland	19	22	15	33	31	24.0	6.9
27	Connecticut	16	16	10	43	36	24.2	12.9
28	West Virginia	28	30	34	7	29	25.6	9.5
29	Kansas	29	29	32	15	28	26.6	6.0
30	North Carolina	36	32	34	14	23	27.8	8.2
31	Alabama	46	45	46	3	4	28.8	20.7
32	Missouri	31	34	36	11	34	29.2	9.2
33	South Dakota	41	43	35	6	24	29.8	13.6
34	Louisiana	34	36	44	26	13	30.6	10.5
34	California	15	21	30	39	48	30.6	11.9
36	Virginia	39	38	37	10	30	30.8	10.9
37	Oregon	20	27	23	38	47	31.0	10.1
38	New Hampshire	35	40	38	9	35	31.4	11.4
39	Nebraska	38	37	29	24	33	32.2	5.2
40	Idaho	42	41	40	22	19	32.8	10.1
41	Utah	44	46	47	2	26	33.0	17.3
42	Arizona	40	42	43	4	38	33.4	14.8
43	Florida	27	28	28	41	50	34.8	9.2
43	Texas	37	33	41	36	27	34.8	4.7
45	Wyoming	50	50	45	32	2	35.8	18.1
46	Montana	43	49	42	46	1	36.2	17.8
47	Mississippi	45	47	50	28	21	38.2	11.5
48	Alaska	47	39	49	48	11	38.8	14.3
49	Hawaii	49	44	39	45	22	39.8	9.5
50	Nevada	48	48	48	47	49	48.0	0.6

Return . . . *. . . on Investment*

Starting Salaries of College Graduates 1947 to 1995

College freshmen report that among the many reasons they enroll in college, the most important are economic: to prepare for better jobs and to earn more money.

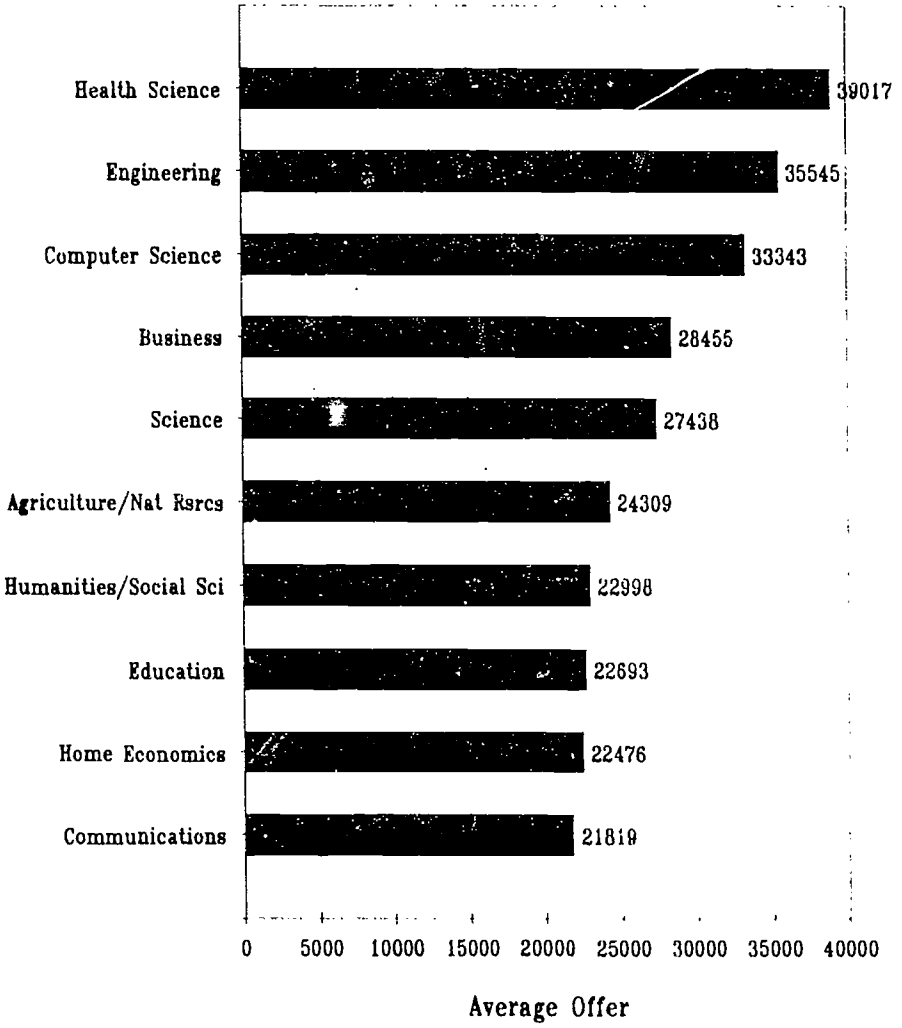
Data on income by educational attainment collected by the Census Bureau and reported regularly in OPPORTUNITY make this relationship clear: more education leads to greater income and the higher standard of living that greater income affords.

Prospective college students seem to understand this relationship. Despite rising real college attendance costs, declining real family incomes and ever more expensive student financial aid college enrollments have risen even while the number of high school graduates has declined. Moreover, enrollment shifts between fields of study further indicate student enrollment sensitivity to shifts in demand for skilled labor in the labor market.

Here we examine data from two private sources on the starting salaries of bachelor's degree candidates. These data indicate:

- Average year salary offers to bachelor's degree candidates averaged $30,361 over the last twelve months. The average for men was $31,987 and for women was $28,077.
- Starting salaries of college graduates vary widely across fields of study, anywhere from $20,000 to $48,000 per year.
- Starting salaries increased sharply between 1951 and 1970 in real terms. Since 1970, starting salaries have declined in many fields to about 1960 levels.

Average Yearly Salary Offers
to Bachelor's Degree Candidates by Curriculum
1995



- Compared to the wages of those who entered the labor market without college educations, college graduates are doing relatively well.
- Starting salaries are declining in real terms. This and growing educational debt burdens combine to diminish the discretionary income available to college graduates who borrowed to finance their higher educations.

Our analyses of the available data reflect three interests. First, how do starting salaries vary from one field of study to another? Second, how have

starting salaries changed over time? And third, what are the implications of the shift from grants to loans for those dependent on financial assistance to get their college degree?

Answers to these questions provide fundamental insights into why students enroll in college after high school, and why they choose to study what they do. The investment model of student demand for higher education includes the benefits and costs of college attendance. This analysis examines those benefits sought by students: better jobs and higher incomes than would otherwise be available to them without collegiate education. We also briefly explore the consequences of declining real starting salaries over the last 25 years.

The Data

Our data primarily come from two sources. The first is the now-discontinued Endicott/Lindquist Survey from Northwestern University which spans the years between 1947 and 1994. This survey was started by Frank Endicott, long-time director of Northwestern University's Placement Office, and later continued by his successor, Victor Lindquist. This survey was conducted of several hundred well-known private corporations, mostly large to medium sized national corporations. Industries included were manufacturing, utilities, banking, retail, engineering, transportation, etc.

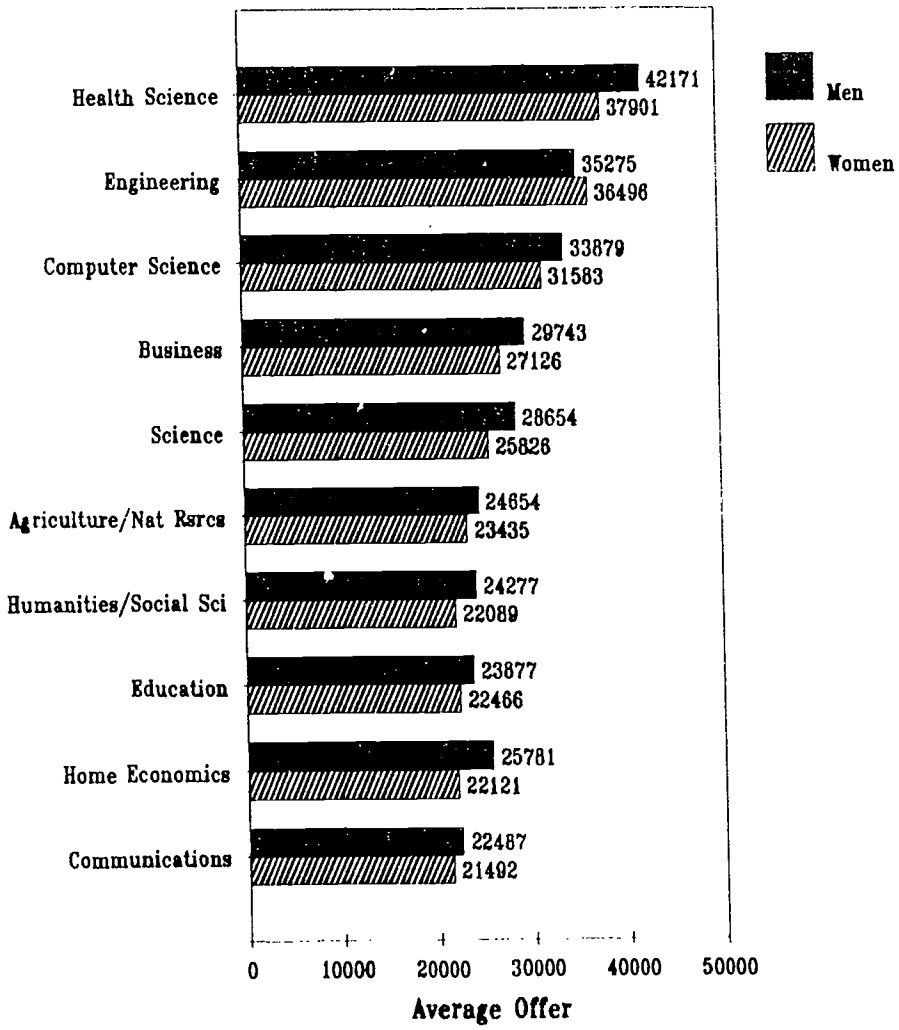
Lindquist, V. R. (1993.) *The Northwestern Lindquist-Endicott Report-1994.* Evanston, Illinois: Northwestern University Placement Center. (Copyrighted. Used by permission.)

Our second data source is the Salary Survey conducted by The National Association of Colleges and Employers (NACE), formerly known as the College Placement Council, of Bethlehem, Pennsylvania. This survey begins in 1962 and provides data through the present. The Survey collects data from several hundred career planning and placement offices of colleges and universities. Data collected are starting salary offers made to new graduates by business, industry, government, and by non-profit and educational institutions. Figures reported are for base salary offers and do not include bonuses, fringe benefits or over-time rates.

Oberman, D. (July, 1995.) *Salary Survey.* Bethlehem, Pennsylvania: National Association of Colleges and Employers. (Copyrighted. Used by permission.)

Connell, M. L. (1991.) *Starting Salary Offers: An Historical Perspective.* Bethlehem, Pennsylvania: College Placement Council, Inc. (Copyrighted. Used by permission.)

Average Yearly Salary Offers by Gender to Bachelor's Degree Candidates by Curriculum 1995



Other data are collected by the Census Bureau in the Current Population Survey and published in two series of the *Current Population Reports*, P-20 and P-60. These data are not included in this analysis, but have been reported previously in OPPORTUNITY. The Current Population Survey data are not reported by field of study, but rather by levels of educational attainment. The Census Bureau has also reported income and earnings by level of attainment and field of study, but not be age in another report, *What's it Worth? Educational Background and Economic Status: Spring 1990*, from the Survey of Income and Program Participation conducted in 1990.

Starting Salaries

The NACE survey summarizes 18,319 salary offers received by bachelor's degree candidates for the twelve month period through September 1995. Of the total, about a third were in business, another third in engineering, a tenth in humanities/ social sciences, with the remainder in the remaining fields of study. The average for these 18,319 offers was $30,361.

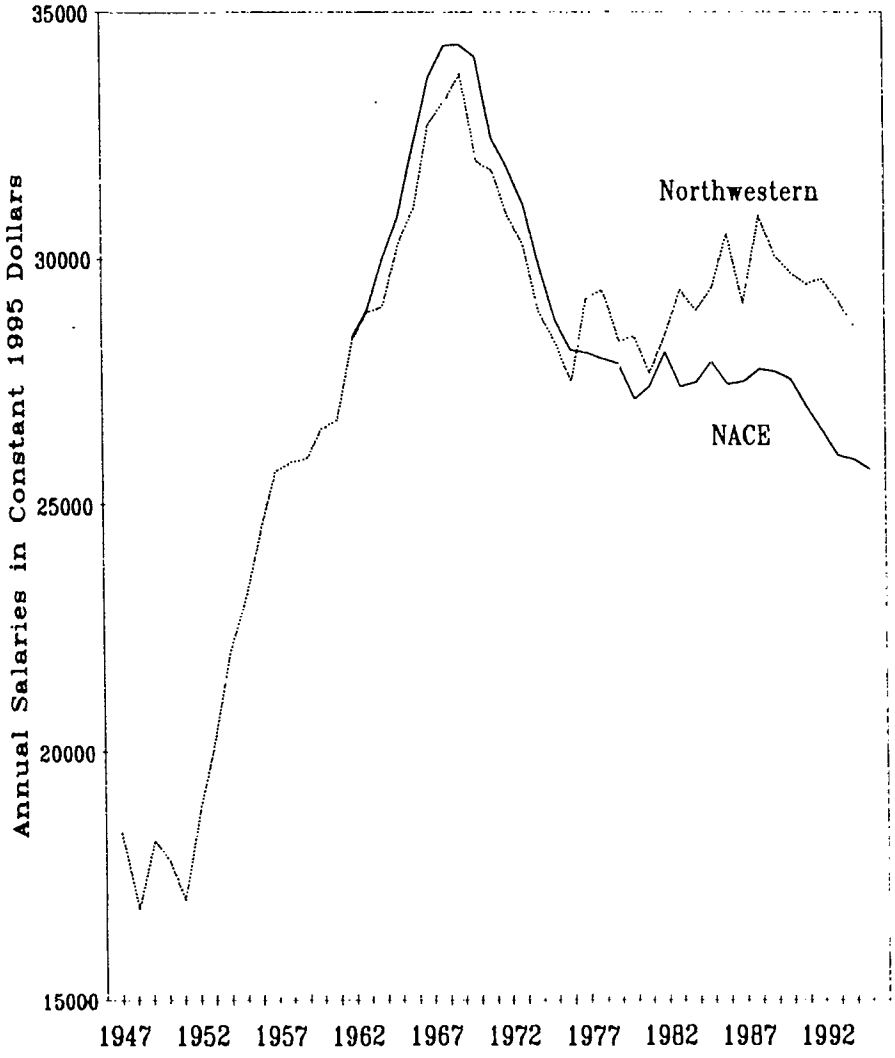
Measured in broadest terms, average salary offers ranged from $21,819 in communications to $39,017 in health sciences. The five highest average salary offers by more specific field of study (with more than 100 offers each) were:

Pharmacy (5 year degree)	$48,217
Chemical Engineering	$39,880
Electrical Engineering	$36,049
Mechanical Engineering	$35,744
Metallurgical Engineering	$35,618

The five lowest average salary offers by more specific field of study (with more than 100 offers each) were:

Journalism	$19,935
Psychology	$21,110
Sociology	$21,675
Visual/Performing Arts	$22,314
Letters (incl. English)	$22,334

Starting Salaries/Salary Offers For Bachelor Degrees in Business Administration, 1947 to 1995

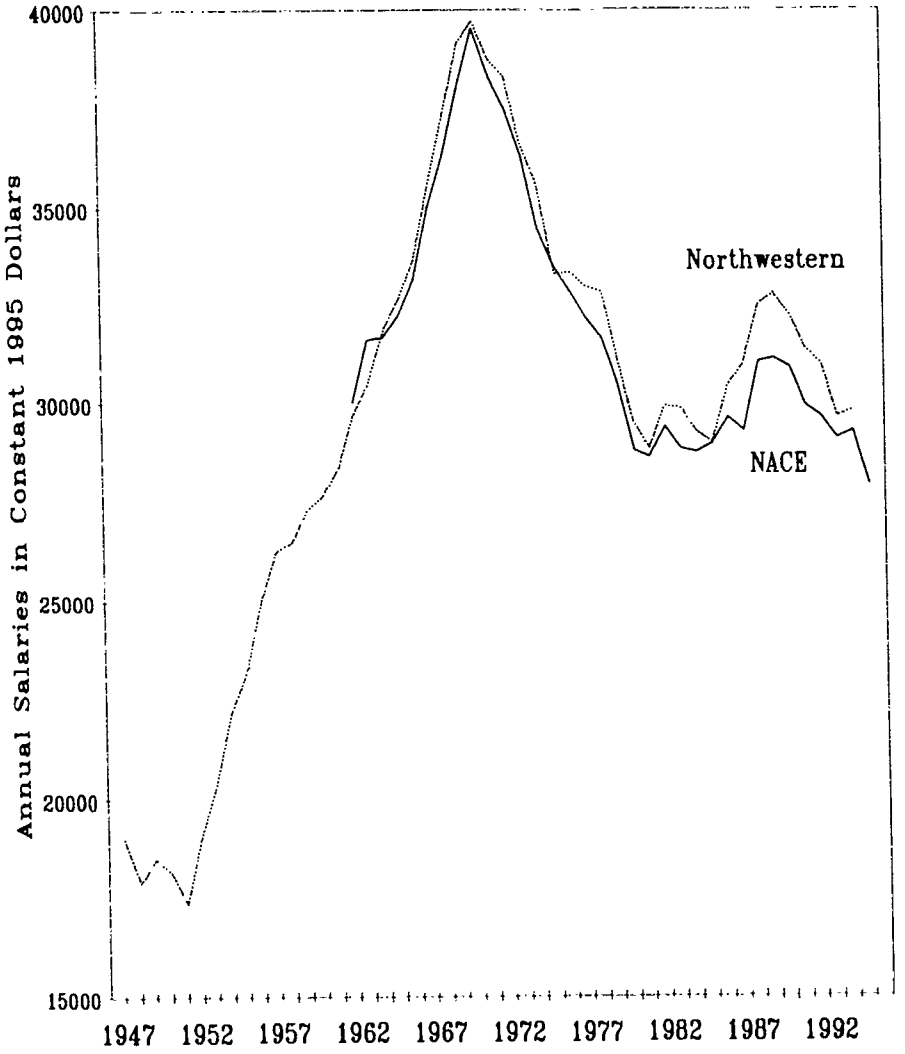


By gender the averages were $31,987 for 10,526 offers to males, and $28,077 for 7493 offers to women. This difference is largely the result in differences in field of study chosen by men and women. The fields that were primarily male, e g. engineering, computer science and science, had considerably higher average salary offers than did those that were predominantly female, e.g. education and communications. As shown in the previous chart within-field differences in average salary offers for men and women were much smaller, and in engineering women actually received higher offers than did men.

Trends

To capture the two major trends in starting salaries of bachelor's degree recipients, we use both the Northwestern and NACE survey data. The Northwestern data span the years from 1947 to 1994 and are based on offers accepted at America's largest corporations. The NACE data span the years from 1962 through 1995 and are based on offers to bachelor's

Starting Salaries/Salary Offers For Bachelor Degrees in Accounting, 1947 to 1995



degree candidates from data collected at career planning and placement offices at 365 member institutions.

The two major trends are: a) the stunning gains in real starting salaries--corrected for the eroding effects of inflation--that occurred between 1951 and 1970, and b) the declining real starting salaries between 1970 and 1995. To achieve as much comparability as possible, we limit our illustrations to fields of study that are similar in the Northwestern and NACE surveys for the years covered by each. These fields are shown on the charts.

Business: Nearly a quarter of the bachelor's degrees awarded in the United States in 1992 were in business fields. The chart on the previous page summarizes the Northwestern and NACE starting salary/salary offer data for *business administration*. All data are presented as annual, constant dollar starting salaries using the CPI-U as the deflator. The two data series are highly coincident in the overlap years between 1962 through 1982, then diverge somewhat.

The starting salaries of *business administration* graduates doubled in constant dollars from $17,000 in 1951 to a peak of $33,700 in 1969. As we shall see in other fields, this was a typical pattern. During the 1950s and 1960s, college graduates like all workers in the labor force experienced unprecedented year-to-year increases in incomes and the standards of living those incomes provided.

After 1969 real incomes dropped off sharply between 1970 and 1976, remained stable through about 1989, and have since resumed their decline. In the Northwestern survey data of employers, real incomes declined by 15 percent, from $33,700 in 1969 to $28,600 in 1994 (the last year of the Northwestern survey). In the NACE survey data of starting salary offers, the decline was 25 percent between 1969 ($34,300) and 1995 ($25,600).

Accounting graduates' starting salaries followed this basic pattern. Here the Northwestern and NACE survey data are very similar, as shown in the chart on this page. Between 1951 and 1970, starting salaries of bachelor degree recipients with accounting degrees more than doubled, from $17,400 to $39,700 in the Northwestern survey data. Between 1970 and 1994, these salaries declined by 25 percent, to $29,800. In the NACE survey data, starting salaries declined by 29 percent between 1970 and 1995 from $39,500 to $28,000.

The salary survey data show similar patterns for *marketing* degrees. Starting salaries nearly doubled between 1951 and 1969, and have since lost 13 percent of the purchasing power in the Northwestern data and 24 percent in the NACE survey.

Engineering: Starting salaries for bachelor degree recipients in engineering are about the highest among all fields. They constitute about seven percent of all bachelor

degree awards in 1992, according to the National Center for Education Statistics.

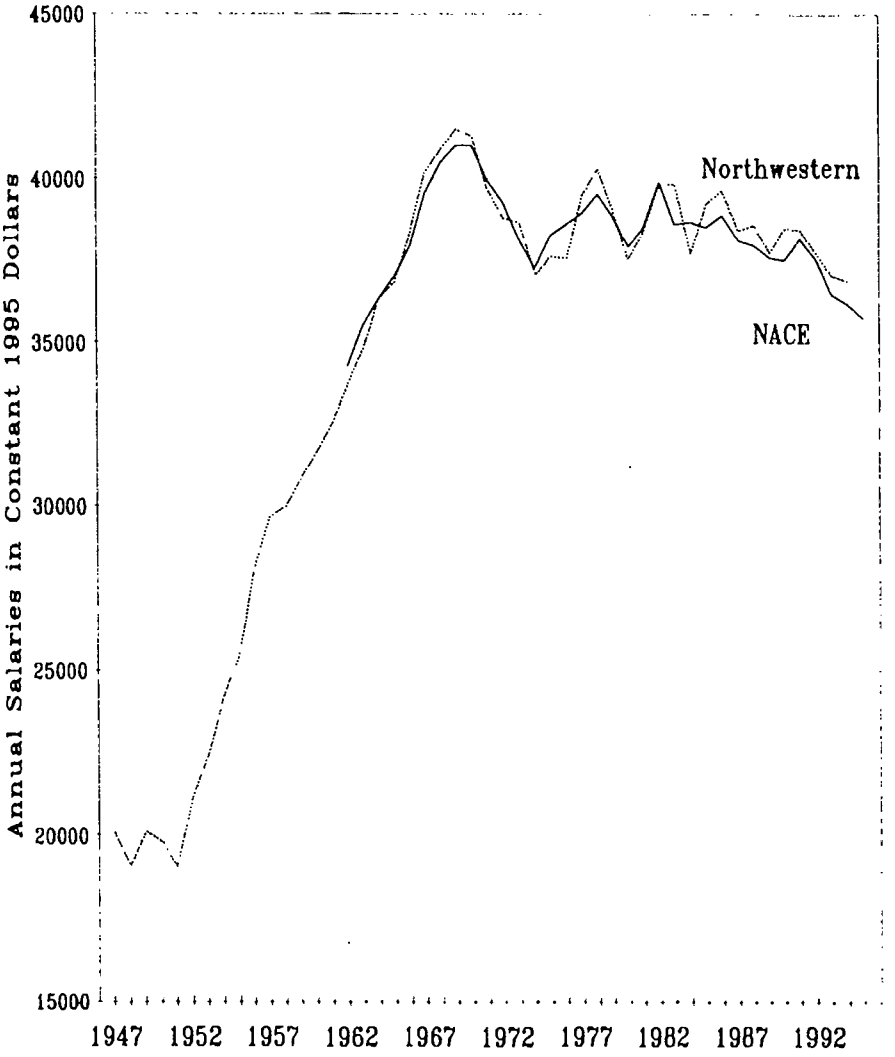
Engineers' starting salaries vary widely between engineering fields. In 1995 the NACE reported a range of $30,600 for civil engineers to $39,900 for chemical engineers. The Northwestern survey lumped all engineering salary offers together and reported the mean. The NACE survey reports fields separately. In the chart for engineering starting salaries, we have used the NACE data reported for mechanical engineers which are generally in the middle of the range of averages for engineering starting salaries in different disciplines.

The results show the usual pattern. Between 1951 and 1969, average starting salaries for engineers increased by 118 percent, from $19,100 to $41,500. After 1969 the decline in real salaries was less than in the business fields. In the Northwestern survey data, starting salaries declined by 11 percent to $36,900 by 1994. In the NACE survey data, starting salary offers for mechanical engineers declined by 12 percent between 1970 and 1995.

Other fields: We have examined starting salary data for other fields of study. The Northwestern and NACE survey data differ significantly in chemistry and mathematics, for example. Moreover, the NACE data for these two fields appear to have internal problems--they are not comparable for the 1962 to 1990, and 1990 to 1995 periods for either discipline. However, because so many students graduate in other areas, we will report what data we have. The above patterns still prevail.

Liberal arts graduates receive starting salaries similar to those in business administration, according to the Northwestern survey between 1964 and 1994. We have cobbled together

Starting Salaries/Salary Offers For Bachelor Degrees in Engineering, 1947 to 1995

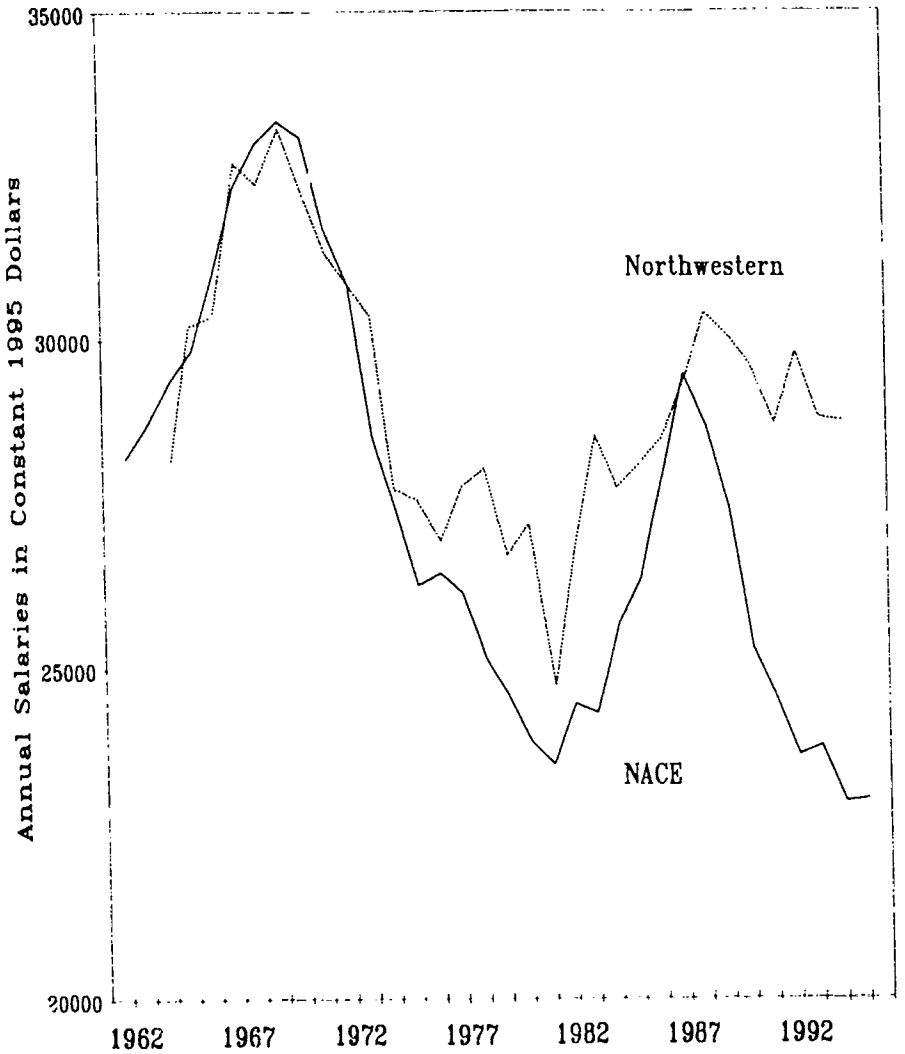


different data sets from the NACE surveys to construct a humanities and social sciences starting salary offer survey for the years 1962 through 1995. The results are shown in the chart on the next page.

Starting salaries for bachelor degrees in the liberal arts or humanities plus social sciences increased between 1962 and 1969, then declined through 1981, then increased through about 1987. After 1987 the Northwestern and NACE data diverge sharply and leave us uncertain about what has happened since 1987. If the Northwestern data are to be believed, average starting salaries declined by 14 percent in real terms between 1969 and 1994. If the NACE survey data are to be believed, then the decline was about 31 percent between 1969 and 1995. In either case, the trend is downward since the end of the 1980s.

Starting salaries for graduates in *allied health* appear to have bucked the downward trend, at least until the last two years. Data are available from NACE since 1973. Between 1980 and 1995 starting salary offers increased from $25,700 to $31,500.

Starting Salaries/Salary Offers for Bachelor Degrees in Liberal Arts, 1962 to 1995



Changes between 1980 and 1995

Since 1980, the federal government and all 50 states have been busily shifting the costs of higher education from taxpayers to students. As real costs of higher education to students have increased, what has happened to the starting salaries of college graduates? We use the salary offer survey data from the National Association of Colleges and Employers to address this question.

In most fields, starting salaries declined between 1980 and 1995. These declines ranged from 0.1 percent in marketing to 12.9 percent in biological science. Only in allied health--which is mainly nurses in the NACE survey--did salaries increase, and in this case by 22 percent.

To the extent that changes such as these reflect imbalances between demand and supply, the labor market appears to want allied health trained college graduates and to be oversupplied with graduates in other fields, often engineering fields.

Summary and Conclusions

The Northwestern and NACE starting salary survey data provide valuable information for students deciding between different fields of study and deciding how much educational debt they are willing to take on to get bachelor's degrees in different fields of study.

We doubt, however, that the students most in need of this information ever see much of this data when they are making such decisions. Informed investment decisions require this kind of information. But Northwestern University has stopped collecting this information, and the NACE survey data covers limited fields, is based on very small and non-random samples, and is available only by subscription. The NACE effort is a worthy one, but needs to become much larger and more accessible to deliver good information to students when they are making career and academic program decisions.

What these data do suggest is that the increase in college graduates' starting salaries that occurred between 1951 and 1970 is over, and that gradual declines in starting salaries have occurred during the last 25 years in most fields.

This raises the problem of growing educational debt and debt repayment obligations from those declining starting salaries. Not all students take on educational debt to finance their higher educations. But the main provider of student financial aid--the federal government--has for nearly twenty years been shifting the form of federal student aid from grants (e.g. Pell Grants) to educational loans (Stafford, Perkins, Ford, etc.). According to tabulations from The College Board, in 1980 loans were 32.8 percent of all aid received by students. By 1994 loans were 53.8 percent of all aid received by students.

This problem has been greatly worsened by the decision of the states to shift state monies out of higher education in ways that obligate public institutions to raise tuition charges to students to offset the loss of state funds.

This market mix diminishes the value of the higher education investment decision, to financially-needy students more than affluent students, in some fields more than others. Some of these market effects are socially desirable: students move out of academic programs with over-supplied labor markets and into other academic programs with better balance between demand and supply.

But there is an amoral quality to purely market-driven distribution of educational opportunity. Those from affluent families are less influenced by net price considerations than are those of limited family resources, dependent on financial aid to complete the financing of college costs, and increasingly dependent on educational debt for that financing.

The private rate-of-return to students in different fields of study varies, as indicated by the starting salary data. It is also driven by differing prices paid by student-investors, and as loans are substituted for grants the private rate-of-return declines beyond the decline in the market value of a bachelor's degree during the last twenty-five years.

Finally, we restate a point often heard in these pages:

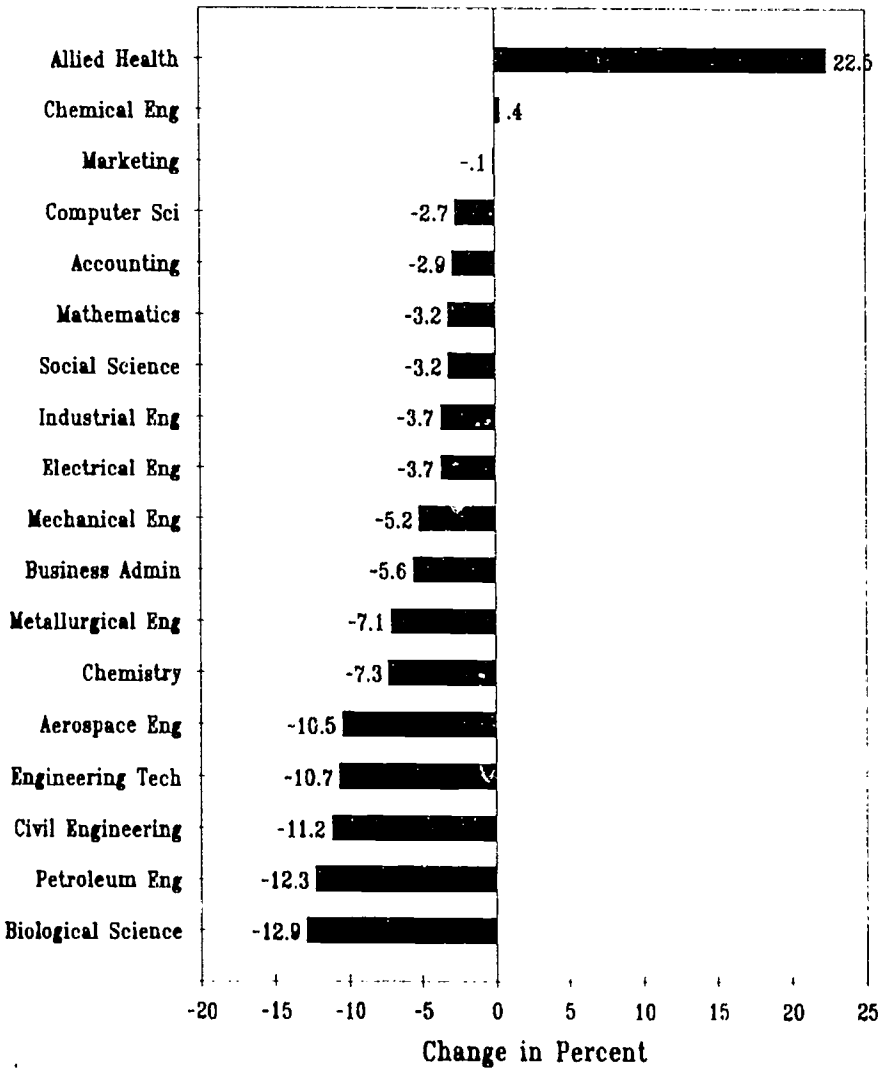
The only thing more costly than attending college is not attending college.

Starting salaries of non-college trained workers are mainly limited to the minimum wage. The minimum wage is now $4.25. In 1995 dollars, the minimum wage was $5.75 in 1980. The difference is a decline of 26 percent, far greater over the same period than that experienced by recent college graduates in any field for which we have data as shown in the chart to the left. Any field of study in college offers a better income and living standard than employment opportunities available to those who entered the labor market with a high school education or less.

The income advantage of the college-educated compared to those with only high school diplomas is growing. For males 25 to 34 years old, in 1971 mean annual income for those with bachelor's degrees was 27 percent greater than males with high school diplomas. By 1992 it was 60 percent greater, and growing rapidly.

The central public policy problem of higher education opportunity remains affordability. Declining real family incomes, declining real starting salaries, increasing real college attendance costs and increasing debt levels for those who need financial aid to pay attendance costs are reallocating opportunity. The market will not correct this problem. It remains for public policy to find the solution.

Change in Starting Salary Offers by Discipline Between 1980 and 1995



Data Reduction

This research letter condenses a great deal of demographic, historical, social, economic and political data to reveal the hidden stories data tell about the condition of educational opportunity in the United States. Indeed, without this supply of data this research letter would not exist and the stories they hold could not be told. And public policy would be made in a dangerous, dark vacuum of ignorance.

Currently, several of the data sources that reveal the condition of educational opportunity in the United States are under assault. The Endicott survey data on starting salaries of college graduates used in the preceding analysis that was collected and reported by Northwestern University since 1947 was ended in 1994. A 48 year time series of data used in numerous econometric studies of student demand for higher education has been terminated by Northwestern.

A far more serious reduction in the publication of vital data is happening at the Census Bureau. Federal funding reductions have led the Census Bureau to reduce the number of reports it publishes by two-thirds. The data is still collected, but it will not be published. As a direct result, access to the data will be restricted to those in the know, those with connections to the responsible professionals at the Census Bureau. These data are collected in the monthly Current Population Survey. But they may not see the light of day in paper form, and the forms in which they are likely to be published--e.g., CDs--may not be readable by computers a few years from now.

Indeed the decennial census for the year 2000 is at risk. Necessary funding for planning, testing, training and design is under critical Congressional scrutiny as this commentary is being written.

There are other serious kinks in the education data supply system that delay, inhibit or deny our understanding of what is happening.

Maybe in this new political era ideology will replace social science as the basis for public policy making. Congress seems intent on pursuing this course. If Congress is successful then of course the facts we report merely get in the way of their vision for America and eliminating bad news is a perfectly rational strategy. But if their ideology fails to deliver educational opportunity, we will not know the damage. The know-nothings will have won, but we will not know it when it happens.

Postsecondary Education
OPPORTUNITY

The Mortenson Research Letter on Public Policy Analysis of Opportunity for Postsecondary Education

Number 41 | Iowa City, Iowa | November 1995

Savage . . . *. . . Inequalities*

Educational Attainment by Family Income 1970 to 1994

Since 1965 the political concept of equality of opportunity has been the foundation of educational policy, particularly at the federal level, in postsecondary education and regarding financing of higher education through need-based student financial aid.

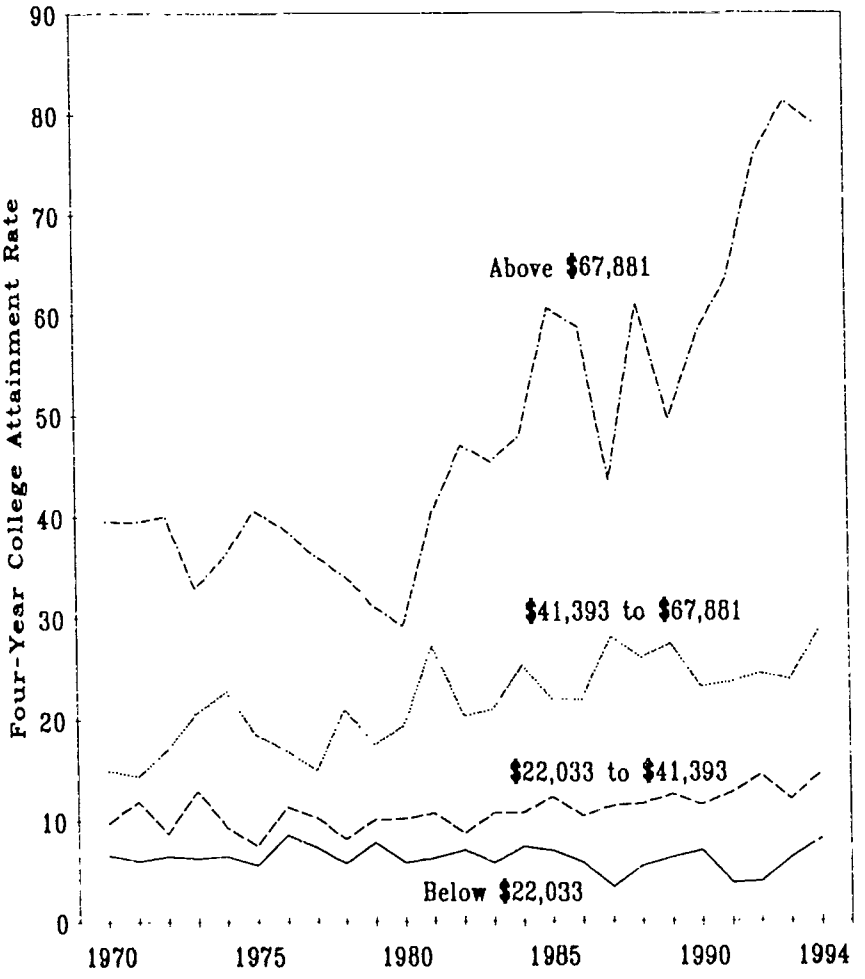
As recently as the 1992 reauthorization of the Higher Education Act of 1965, the committee reports of both the House of Representatives and the Senate to their respective chambers reasserted the national goal to equalize higher educational opportunities. Title IV, containing both federal student financial aid and outreach (TRIO) programs, targets federal investments on students from low and middle family income backgrounds.

Here, then, we update and extend our previous analysis (OPPORTUNITY, June 1994) of educational attainment by the family income backgrounds of Americans between the ages of 18 and 24 using data from the October 1994 Current Population Survey to be soon published by the Census Bureau .

Our update with 1994 data confirms our previous conclusions. The disparities in educational attainment for young adults are:

- *Huge,*
- *Persistent,*
- *Growing, and*
- *Nearly as wide as these disparities have ever been.*

Estimated Chances for a Baccalaureate Degree by Age 24 by Family Income Quartile 1970 to 1994



By age 24 a person whose family income falls in the top quartile is ten times more likely to have received a bachelor's degree than is another person whose family income falls in the bottom quartile. In 1979, before the redistribution of higher educational opportunity began, the difference was four times.

We have not only failed to achieve equality of higher educational

opportunity but the gains made in the 1970s have been completely erased in the 1980s and 1990s and by the 1990s we have achieved greater inequality of higher educational attainment than has existed at any time in the last 25 years of reported Census data.

In a labor market that reserves its best paying jobs for those with the highest levels of educational attainment, the redistribution of higher educational opportunity since 1979 also redistributes human welfare.

- Those from the highest income families have, since 1979, achieved the greatest success in baccalaureate degree attainment.
- Those from the lowest income families have achieved the least success in degree attainment.

Whereas higher education provides access to the best paying jobs in the economy, the redistribution of higher educational opportunity since 1979 has increasingly limited access to those jobs to students whose family incomes fall in the top quartile of the family income distribution, above about $68,000 in 1994.

Higher educational opportunity is a double-edged sword. Opportunity provides preparation for high incomes and affluent living standards. But the rationing of opportunity since 1979 has also become a device of socio-economic stratification, segregation, frustration, and increasingly desperate impoverishment for those unable to participate and succeed in higher education.

Higher educational opportunity is simultaneously the vehicle for socio-economic mobility, and has become--through neglect--the means by which society is fracturing.

- The affluent are clearly succeeding in higher education, and their absolute and relative living standards can be expected to continue to thrive as they have since the end of World War II.
- The poor are clearly failing in higher education, and their absolute and relative living standards can be expected to continue to deteriorate as they have since 1973.

Whereas higher education was clearly thought of as the means to socio-economic mobility, its rationing since 1979 has also become the means by which the rich become richer and the poor become poorer.

Data and Analysis

This analysis updates and extends a study originally prepared at The American College Testing Program, which is now out of print. The original study contains additional data on high school graduation and college participation by family income by gender and race/ ethnicity.

Mortenson, T. G., and Wu, Z. (1990). *High School Graduation and College Participation of Young Adults by Family Income Backgrounds, 1970 to 1989.* Iowa City, IA: American College Testing Program.

The primary source for the data used in this analysis is data collected each year by the Census Bureau in the October Current Population Survey. These data are published in a comprehensive statistical report in the Current Population Reports series P20. The most recent published report is:

Bruno, R. R., and Adams, A. (1994). *School Enrollment-Social and Economic Characteristics of Students: October 1993.* Current Population Reports, Population Characteristics, P20-479. Washington, DC: U.S. Government Printing Office.

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Mission Statement

This research letter is founded on two fundamental beliefs. First, sound public social policy requires accurate, current, independent, and focused information on the human condition. Second, education is essential to the development of human potential and resources for both private and public benefit. Therefore, the purpose of this research letter is to inform those who formulate, fund, and administer public policy and programs about the condition of and influences that affect postsecondary education opportunity for all Americans.

In this analysis we have also used unpublished data from the October 1994 Current Population Survey. These data are currently being prepared for publication by the Census Bureau and will become generally available in the next few months.

Data definitions and limitations are important in this analysis. We focus on 18 to 24 year olds here. We are concerned about parental family income in this analysis. We are not interested in married young adults, who have established new families and for whom parental income information is not available. The unmarried 18 to 24 year olds include both dependent family members as well as those in "other marital status" including divorced, separated and widowed. This population consists largely of very low income young females who are not dependent family members.

Our analysis of the data on unmarried 18 to 24 year olds adopts a three-stage model of educational attainment leading to the bachelor's degree. First a person must graduate from high school. Second, once graduated a student must "participate" in college. Third, once in college a student must earn a bachelor's degree by age 24. The product of each of these separate rates reflects the proportion of those 24 years old that have received a bachelor's degree from college.

College participation, as collected and reported by the Census Bureau, consists of 18 to 24 year olds currently enrolled in college, plus those not currently in college who have completed less than a bachelor's degree, plus those not currently in college who have completed a bachelor's degree or more from college.

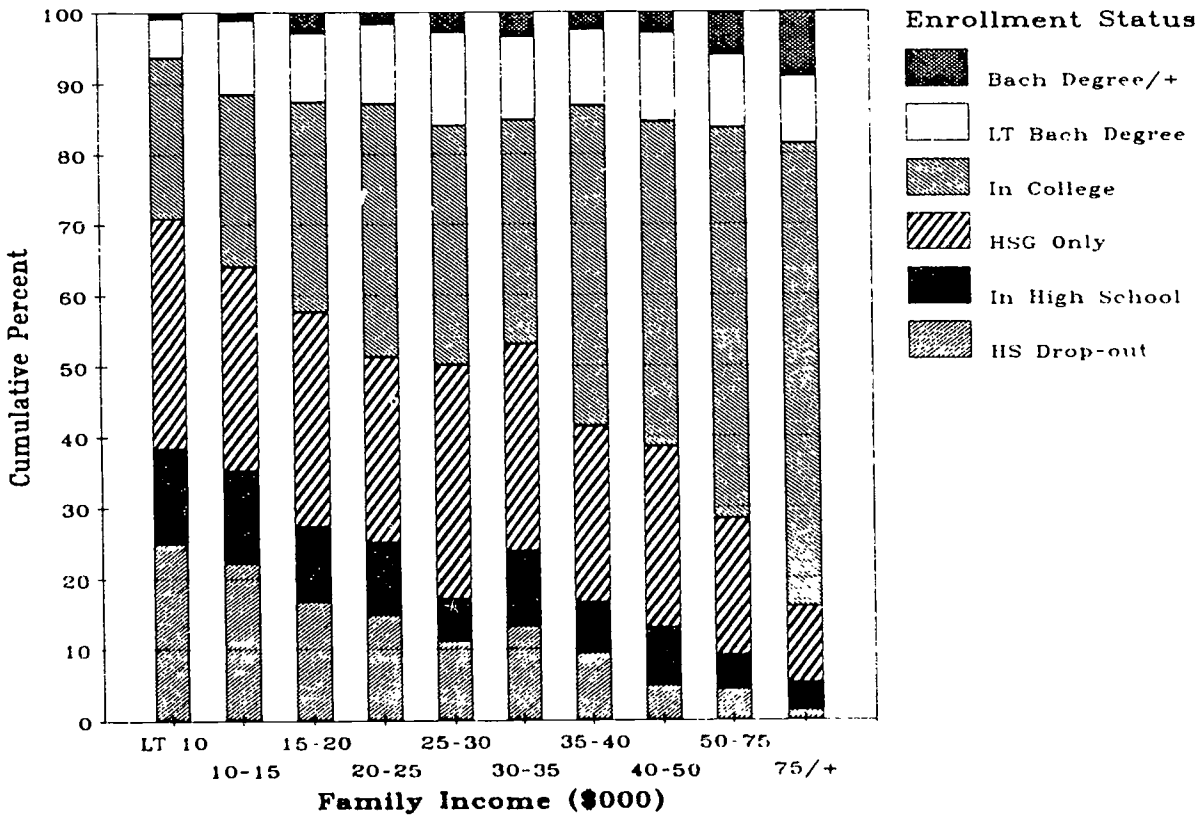
The quartiles of family income reported here have been calculated from the Census Bureau's tabulations. Those reported in this analysis refer to quartiles of family income collected in the October 1994 Current Population Survey. These are quartiles of families of high school graduates. In 1994 they are:

Q1:	$0 to $22,033
Q2:	$22,033 to $41,393
Q3:	$41,393 to $67,881
Q4:	greater than $67,881

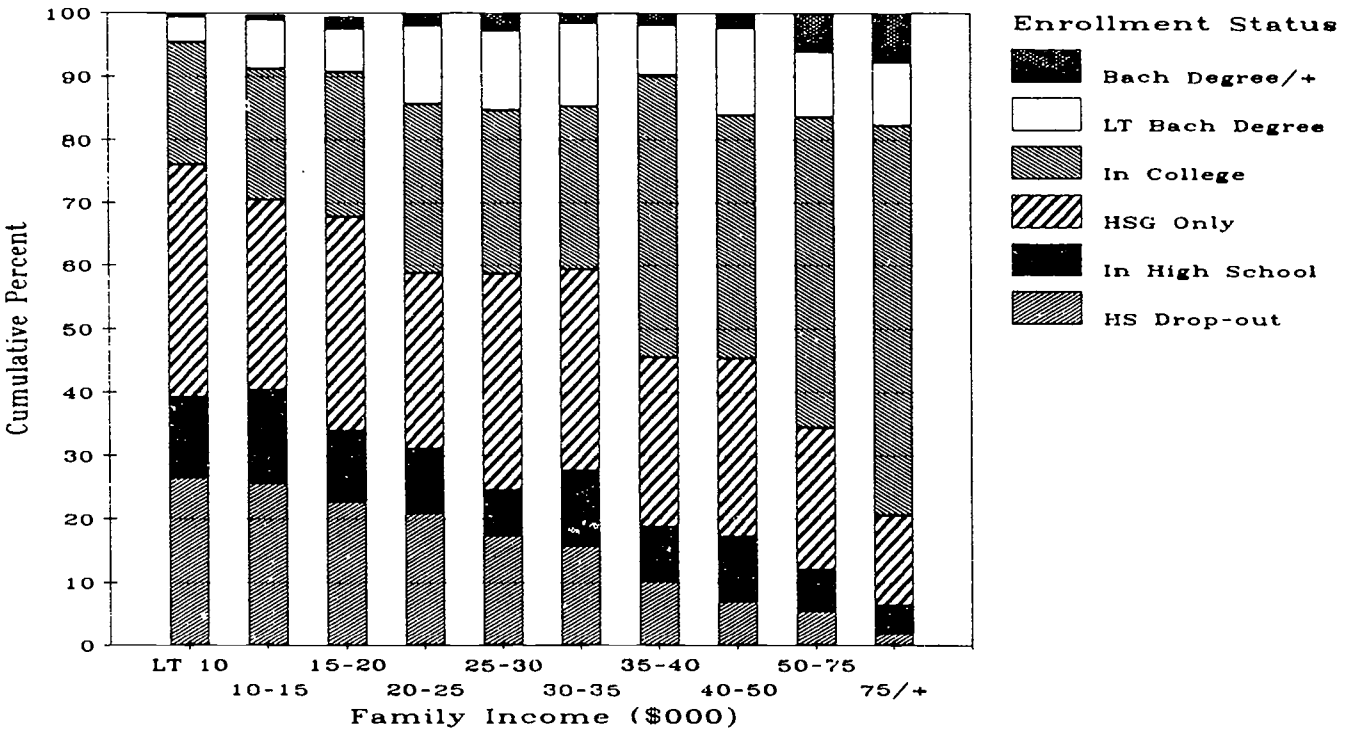
That is, exactly one quarter of all unmarried 18 to 24 year old high school graduates lived in families with incomes below $22,033; another quarter lived in families with incomes of between $22,033 and $41,393, etc.

Over the twenty-five year period between 1970 and 1994, family income has been redistributed: the

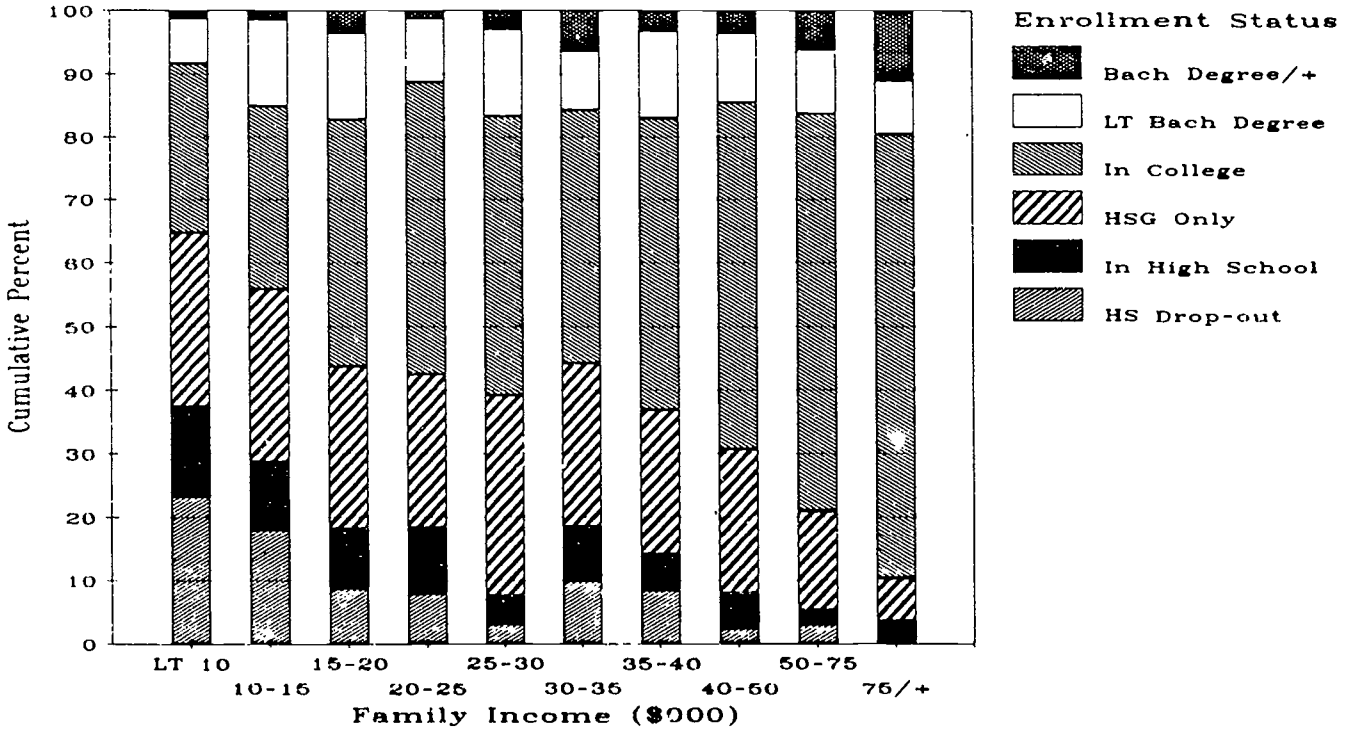
Enrollment Status of Dependent Family Members
18 to 24 Years Old by Family Income, 1994



Enrollment Status of Male Dependent Family Members 18 to 24 Years Old by Family Income, 1994



Enrollment Status of Female Dependent Family Members 18 to 24 Years Old by Family Income, 1994



most affluent families have more of it, and the poorest families have less of it. This growing inequality is reflected in the income data that defines family income quartiles used in this analysis.

Family Income Upper Limits in 1970 and 1994, Constant 1994 Dollars

Quartile	1970	1994
Q1:	$27,336	$22,033
Q2:	$41,538	$41,393
Q3:	$61,950	$67,881

While median family income remained about flat between 1970 and 1994, the bottom quartile of family income grew significantly poorer while the top quartile grew significantly more affluent during this period. Of the two middle income quartiles, the second quartile grew poorer while the third quartile became more affluent.

Enrollment Status in 1994

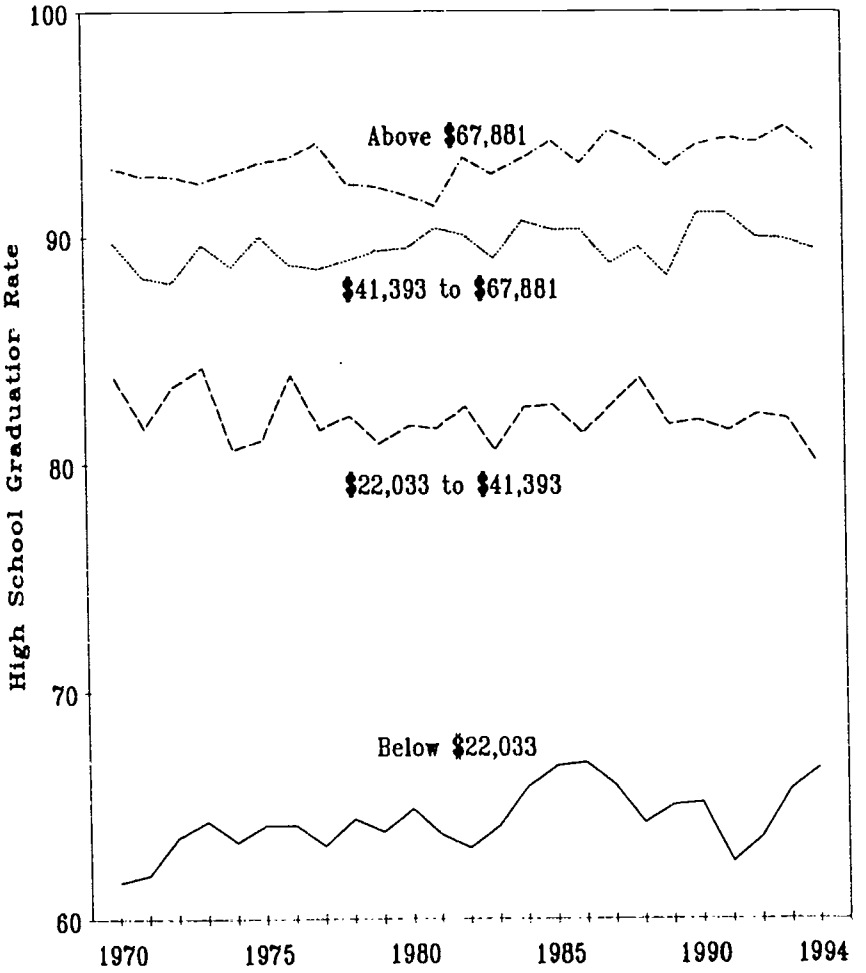
The chart on page 3 summarizes the enrollment status of dependent family members between the ages of 18 and 24 by family income ranges in October 1994. The charts on page 4 break these data down by gender.

The charts illustrate the powerful relationship between family income and educational status.

- Among those from families with incomes of less than $10,000 per year, 25.1 percent were high school dropouts, compared to 1.4 percent of those from families with incomes greater than $75,000.
- Those 18 to 24 still enrolled in high school comprised 13.3 percent of those from families with incomes below $10,000, but 3.8 percent of those from families with incomes above $75,000.
- At the other extreme, bachelor degree holders were 0.9 percent of those from families with incomes below $10,000, and 9.1 percent of those from families with incomes over $75,000.
- The college enrollment rate ranged from 22.8 percent of those from families with incomes of less than $10,000, to 65.5 percent for those from families with incomes greater than $75,000.

This general pattern holds for both males and females. The main difference is that at every level of family income, women are farther along in their educational attainment than are men. The differences are greatest in high school attrition where men are more likely to be dropouts than are women.

High School Graduation Rates by Family Income Quartiles for Unmarried 18 to 24 Year Olds 1970 to 1994



High School Graduation Rate Trends

The above chart shows the rates at which unmarried 18 to 24 year olds from each quartile of family income have graduated from high school between 1970 and 1994. In 1994 the high school graduation rate was 66.6 percent in the first quartile, 80.1 percent in the second, 89.4 percent in the third and 93.9 percent in the top quartile of family income.

At the very first hurdle along the path toward a baccalaureate degree from college, the field gets sorted out. Those from the highest family income levels have the greatest chance of graduating from high school, while those from the lowest income backgrounds have the least chance.

Moreover, this basic pattern has persisted without interruption for every one of the last twenty-five years. Very modest increases in high school graduation rates in the bottom quartile have been at least partially offset by modest declines in the rate for those from the second quartile of family income.

This lack of significant progress has occurred during a political era characterized by a public policy professing commitment to equalizing educational opportunities and more recently to increasing high school graduation rates. The gains apparent here have been modest at best.

College Participation Rate Trends

The chart on this page shows the rates at which unmarried 18 to 24 year old high school graduates from the four family income quartiles have participated in college between 1970 and 1994. Participation rates include those currently enrolled and those who were enrolled but have left with or without bachelor's degrees.

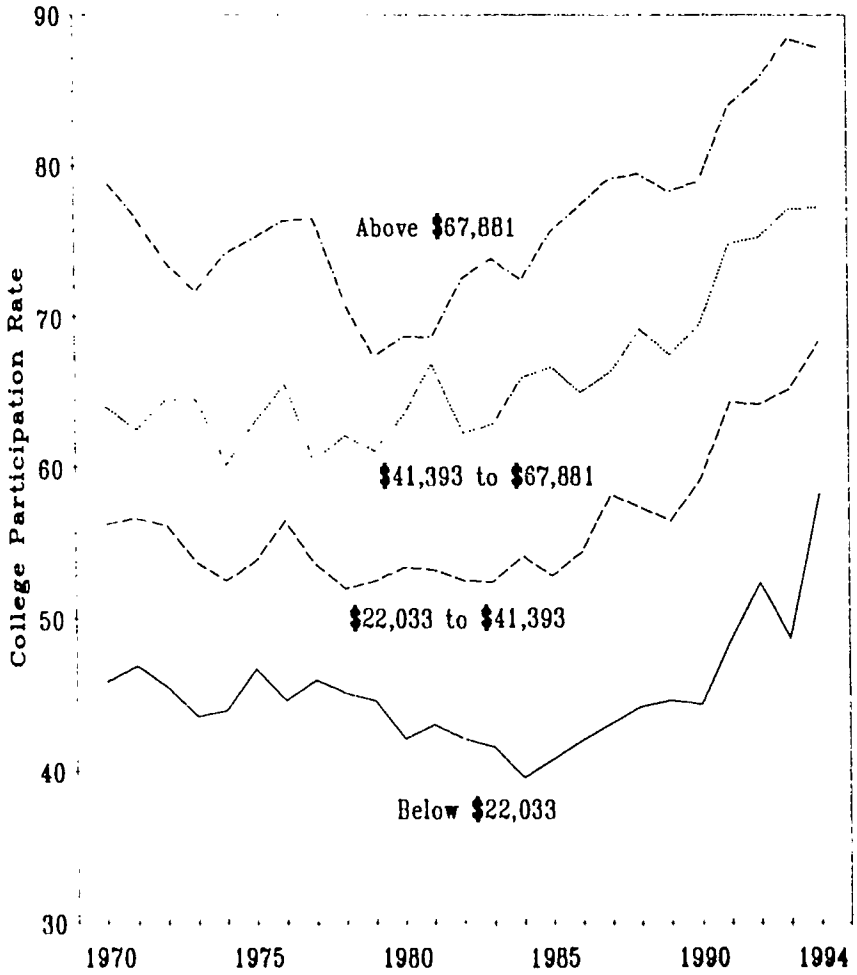
In 1994 the college participation rate was 58.2 percent for those from the bottom quartile of family income, 68.3 percent in the second quartile, 77.2 percent in the third, and 87.8 percent in the top quartile.

The inequality in high school graduation rates for young adults from different family income backgrounds carries over into college participation as well. In fact, given that this chart is limited to high school graduates, the disparities have been magnified at this the second hurdle on the path toward a baccalaureate degree.

Here, some of the inequality that accumulated after rationing of higher educational opportunity was effectively imposed beginning in 1980 was reversed in the 1994 data. College participation rates appear to have declined slightly in the top quartile of family income, remained flat in the third quartile, and increased substantially in the two lowest family income quartiles.

However, since rationing began in 1979, the gains in college participation rates have been least among those from lowest income families, and greatest among those from highest income families:

College Participation Rates by Family Income Quartiles for Unmarried 18 to 24 Year Old High School Graduates 1970 to 1994



Change in College Participation Rates between 1979 and 1994 by Family Income Quartiles

Quartile	Change
Q1:	+13.6%
Q2:	+16.2%
Q3:	+16.1%
Q4:	+20.5%

Enrollment Distribution by Type and Control of Institution

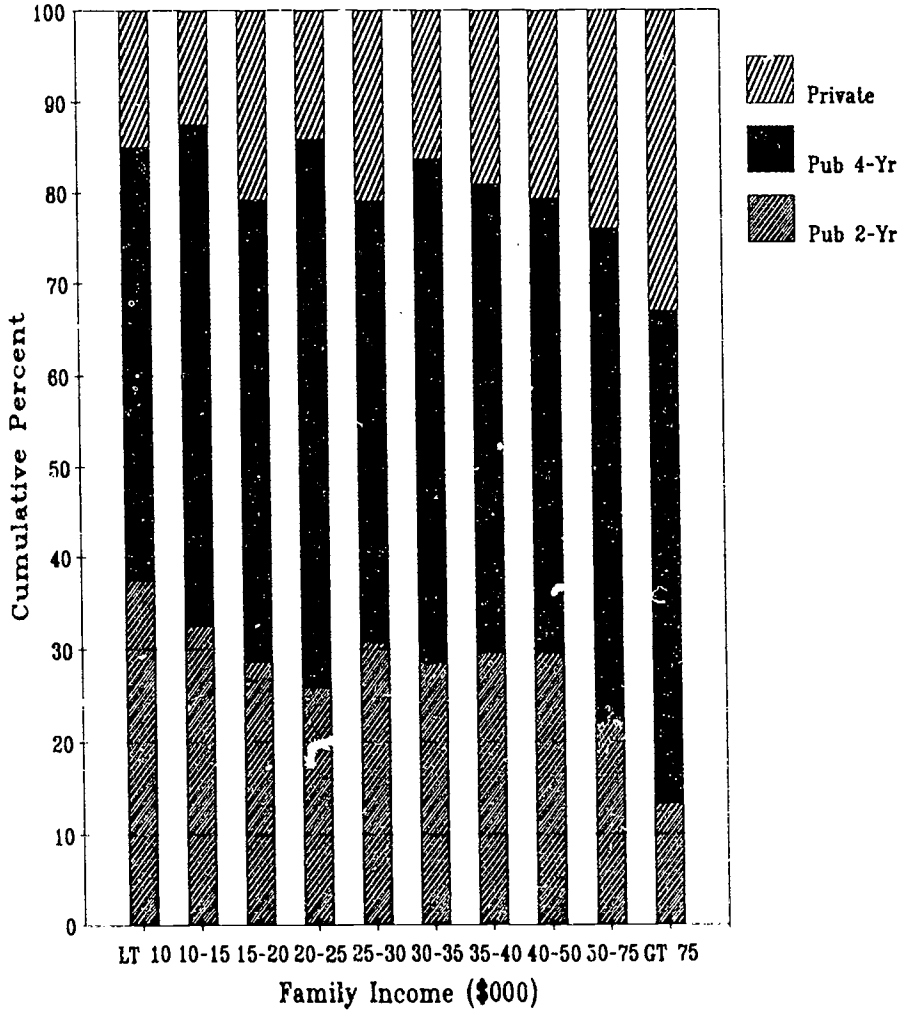
About half of all 18 to 24 year old dependent family members that were enrolled in college in October 1994 were enrolled in public 4-year colleges and universities. The balance were enrolled in either public 2-year colleges or private colleges and universities.

The distribution of college enrollments by institutional type and control varied by family income levels, as shown in the chart on this page. Looking only at dependent family members 18 to 24 years enrolled in college:

- Public 4-year colleges and universities enrolled as little as 47.4 percent of those from family incomes below $10,000, to as much as 59.9 percent of those from family incomes of between $20,000 and $25,000. Median family income was $53,046.
- Public 2-year colleges enrolled as much as 37.6 percent of those from families with incomes below $10,000 to as little as 13.4 percent of those from families with incomes of more than $75,000. Median family income was $42,909.
- Private colleges and universities enrolled as little as 12.4 percent of those from families with incomes of between $10,000 and $15,000, to as much as 33.1 percent of those from families with incomes greater than $75,000. Median family income was $63,095.

As these data suggest, the proportion of enrollment of dependent 18 to 24 year olds in 2-year institutions was highest among students from lowest income families, and lowest among students from highest income family backgrounds. The proportion of freshmen enrolled in 4-year colleges and universities was highest at the highest levels of family income, particularly above $50,000 per year.

Enrollment Distribution of Dependent Family Members Age 18 to 24 Years by Family Income and Institutional Type 1994



Enrollment by Attendance Status

In 1994 84.8 percent of all dependent 18 to 24 year olds enrolled in college were enrolled on a full-time basis. This proportion ranged from 73.4 percent among those from families with incomes of $10,000 to $15,000, to a high of 89.9 percent for those from family incomes above $75,000. Those at the extremes of the family income distribution were most likely to be enrolled full-time. Except for the lowest income range--below $10,000--full-time college enrollment increased with family income.

Among dependent family members 18 to 24 years old:

- Males were enrolled full-time at a rate of 85.4 percent, compared to 84.3 percent for females. Generally males and females had similar full-time rates across income levels except below $15,000 in family income where males were more likely to be enrolled full-time than females by about 10 percentage points.
- Students in public colleges were enrolled full-time at a rate of 82.8 percent, compared to 91.6 percent in private colleges.

- Of those enrolled in public colleges, 71.5 percent of those enrolled in 2-year colleges were attending full-time, compared to 87.8 percent of those in 4-year colleges and universities.

College Completion

We have constructed *estimates* of bachelor's degree completion by age 24 by family income quartile for those who enroll in college. These estimates combine Current Population Survey data with other data on graduation rates by family income level collected in the six-year follow-up to the 1980 cohort in High School and Beyond. Our *estimates* of bachelor degree completion by age 24 by family income quartile for the years between 1970 and 1994 are shown in the chart on this page.

In 1994, of the unmarried 18 to 24 year olds from the bottom quartile of family income who enrolled in college, 20.8 percent are estimated to have completed a bachelor's degree by age 24. This percentage increased to 26.7 percent in the second quartile, 41.7 percent in the third quartile, and 96.0 percent in the top quartile of family income.

At this, the final hurdle along the path to a baccalaureate degree by age 24, the very large disparities in educational progression across levels of family income that exist at the high school graduation and college participation level are magnified even further.

Baccalaureate Degree Attainment

We have constructed the high school graduation, college participation, and college completion rates such that their product measures the proportion of the unmarried 24 year old population that holds a bachelor's degree. This is shown on page 1 of this issue of OPPORTUNITY.

By 1994 our analysis indicates that 8.0 percent of those from the bottom quartile will have earned a bachelor's degree by age 24. This is the mathematical product of the following:

High school graduation	.6661
x College participation	.5820
x College completion	.2076
= College attainment	.0805

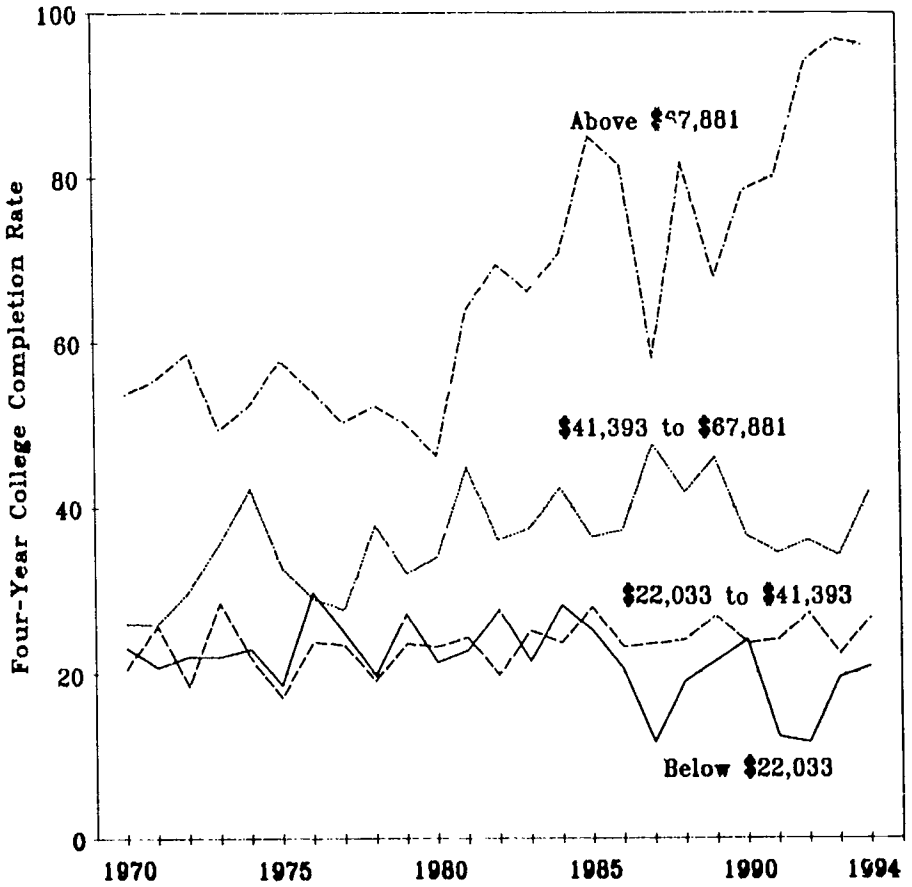
Similarly, in the second quartile of family income, the proportion earning a bachelor's degree by age 24 increases to 14.6 percent. In the third quartile the proportion increases to 28.8 percent. And in the top quartile of family income, 79.1 percent have a bachelor's degree by age 24.

There are different ways to express the significance of these findings. Given the federal aid to equalize higher educational opportunity:

- In 1994 a student from the top quartile of family income was about ten times more likely to earn a bachelor's degree by age 24 than was a student from the bottom quartile.
- In 1979, at the end of the equity era and just before the beginning of rationing of higher educational opportunity, a student from the top quartile was four times more likely to have the degree by age 24 than was the student in the bottom quartile.

This measures how far we have fallen away from the federal goal to equalize higher educational opportunity in the last 15 years.

Estimated Four-Year College Completion Rates by Age 24 by Family Income Quartiles for Unmarried College Students 1970 to 1994



Declining social investment . . . *. . . in higher education*

State Tax Fund Appropriations for Higher Education for FY1996

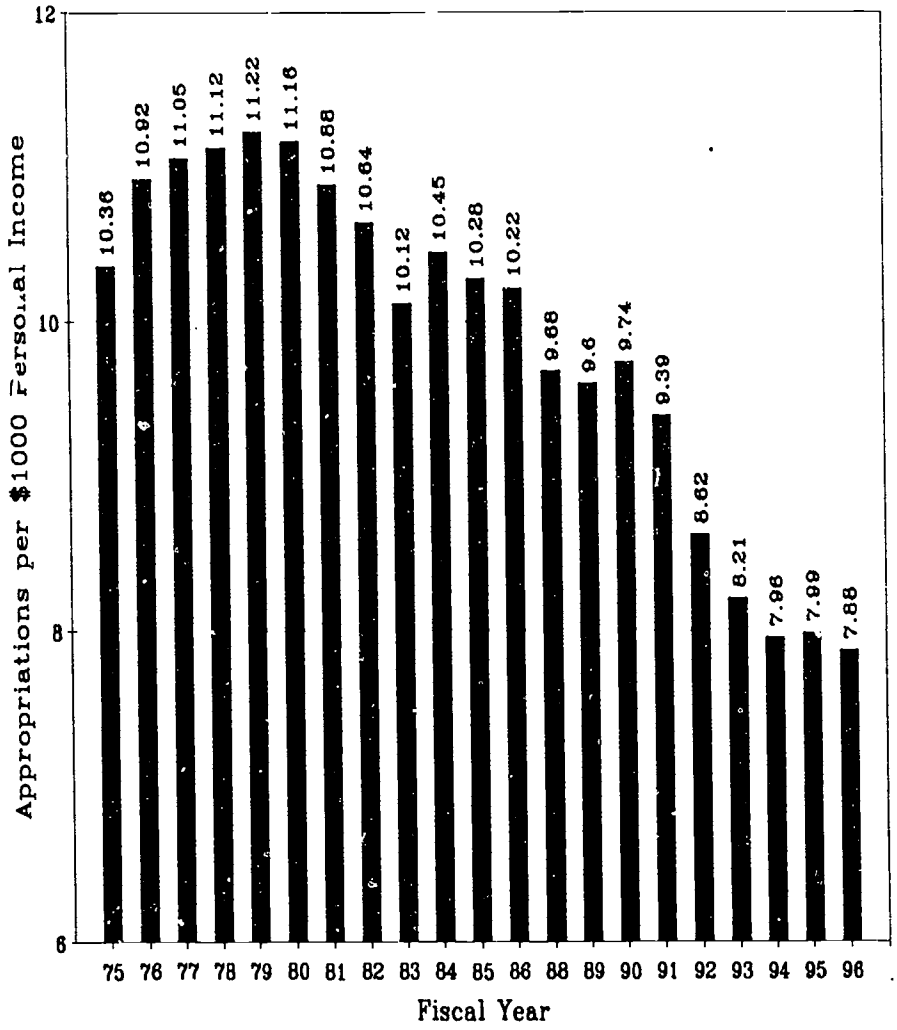
The Fiscal Year 1996 state tax fund appropriations for higher education have been collected by the Center for Higher Education at Illinois State University and published in ***The Chronicle of Higher Education.*** *We extend these data another step by adding a control for state personal income in the following analysis.*

These data tell an important story about differences among states in the social investment in higher education. When controlling for the resources available within states, states vary widely in the proportion of available resources that are allocated for investments in higher education.

Partly the interstate differences reflect the contribution of private higher education in each state. Those states with substantial private higher education systems--such as New England--do not need to appropriate as much for higher education as do other states where public higher education plays the dominant role in state higher education.

More important here is our understanding of changes in intrastate investment in higher education over time. Changes from year-to-year in state spending on higher education controlling for changes in the tax base (personal income) of any given state reflect changes in the tax and spending priorities of elected policy makers, especially the governor and state legislative leaders.

Appropriations of State Tax Funds for Operating Expenses of Higher Education per $1000 of Personal Income FY1975 to FY1996



As shown in the chart on the right for all states which control for changes in personal income over time, state tax fund appropriations for operating expenses of higher education have been declining--substantially and almost without interruption--since FY1979.

In Fiscal Year 1979, state tax funds appropriated for the operating expenses of higher education were $11.22 per $1000 of personal income. Expressed another way, 1.1 percent of all personal income in each state was appropriated by states in support of higher education, mainly public institutions.

By FY1996 this had dropped to $7.88 per $1000 of personal income, or by $3.34, a decline of 29.8 percent. It is this decline in the allocation of available social resources for social investments in higher education that is the focus of this analysis.

Appropriations of State Tax Funds for Operating Expenses of Higher Education per $1000 of Personal Income

State	1974-75	1976-77	1978-79	1979-80	1980-81	1982-83	1983-84	1984-85	1985-86	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	Change: 1978-79 to 1995-96 Dollars	Change: 1978-79 to 1995-96 Percent
Alabama	$11.54	$16.03	$18.04	$16.02	$16.29	$12.64	$11.67	$13.73	$15.69	$12.42	$15 65	$14.73	$15.45	$13.02	$12.98	$13.08	$14.19	$12.54	$-5.50	-30.5%
Alaska	18.42	19.60	16.64	16.42	17.98	25.91	20.85	20.26	26.98	16.55	17.21	17.59	15.94	15.05	14.49	13.67	12.44	11.93	$-4.71	-28.3%
Arizona	15.80	15.52	14.60	13.41	13.59	11.83	11.09	11.94	11.96	11.00	11.23	10.91	10.92	10.31	9.74	9.29	9.33	8.94	$-5.66	-38.8%
Arkansas	10.24	11.76	11.81	13.00	12.41	10.73	9.87	11.93	12.99	10.63	10.42	10.29	10.28	11.49	11.87	10.93	10.80	10.95	$-0.86	-7.3%
California	12.01	13.10	13.47	14.14	13.85	11.35	8.83	11.42	11.34	10.41	10.17	10.81	10.53	9.14	7.64	6.57	6.95	7.22	$-6.25	-46.4%
Colorado	13.64	13.60	12.66	11.41	10.44	10.53	9.90	9.57	9.23	8.86	9.25	9.29	8.88	8.40	8.10	7.46	7.10	7.11	$-5.55	-43.8%
Connecticut	7.40	6.76	8.26	7.68	7.93	6.29	6.15	6.48	6.32	6.55	6.84	6.22	6.08	6.01	5.68	5.56	5.46	5.28	$-2.98	-36.1%
Delaware	11.18	11.50	10.91	10.71	11.76	11.58	10.64	11.07	10.90	10.67	10.00	9.91	9.84	9.03	8.65	8.23	9.03	8.80	$-2.11	-19.3%
Florida	10.91	9.24	9.48	9.37	9.32	8.75	8.06	8.29	8.07	7.99	7.87	7.66	7.30	6.15	5.61	5.99	5.99	6.06	$-3.42	-36.1%
Georgia	11.29	10.60	11.42	11.30	11.06	10.73	10.18	10.28	9.86	9.25	9.13	9.14	9.30	7.88	8.24	8.29	8.43	8.59	$-2.83	-24.6%
Hawaii	12.74	17.25	16.80	15.95	16.20	17.10	15.17	15.14	15.40	16.10	16.15	15.90	14.49	14.17	14.21	14.70	14.09	11.97	$-4.83	-28.8%
Idaho	14.78	16.57	16.34	13.58	13.74	12.13	10.94	11.65	12.06	12.37	12.24	12.46	13.24	12.70	12.09	11.42	11.77	11.38	$-4.96	-30.4%
Illinois	9.45	9.00	9.34	8.76	8.77	7.76	7.73	8.29	8.27	7.40	7.35	8.21	7.85	7.42	7.18	7.07	7.18	7.10	$-2.24	-24.0%
Indiana	9.32	10.73	10.42	9.93	9.93	9.13	8.89	9.51	9.43	9.75	9.82	9.82	9.93	9.59	9.28	8.81	8.44	8.37	$-2.05	-19.7%
Iowa	9.65	12.77	13.77	13.10	13.05	12.55	11.88	12.62	11.25	11.60	11.87	12.09	13.12	11.77	12.45	11.94	12.44	11.80	$-1.97	-14.3%
Kansas	10.47	12.73	13.39	12.91	11.88	12.11	10.88	11.51	10.89	10.10	10.21	11.31	11.07	9.91	10.19	9.78	9.99	9.90	$-3.49	-26.1%
Kentucky	12.58	12.12	13.27	12.96	11.80	11.79	11.97	11.69	11.29	11.92	11.53	11.51	11.86	11.59	10.72	9.97	10.24	9.97	$-3.30	-24.9%
Louisiana	12 54	11.55	12.03	12.39	13.07	12.24	10.26	12.19	11.87	10.21	9.44	9.65	10.35	9.38	9.70	8.34	8.27	7.81	$-4.22	-35.1%
Maine	10.89	8.33	7.87	8.34	8.11	7.44	6.29	7.23	8.07	9.37	9.81	9.71	9.86	8.83	8.03	7.71	7.44	7.44	$-0.43	-5.5%
Maryland	8.13	9.68	9.34	9.34	9.50	8.84	8.14	8.64	8.47	8.17	8.46	9.14	8.97	7.69	7.31	6.58	6.64	6.56	$-2.78	-29.8%
Massachusetts	6.54	6.75	6.51	6.88	6.29	6.42	5.38	8.39	8.30	8.66	7.75	6.66	5.32	4.30	4.63	5.79	6.14	5.90	$-0.61	-9.4%
Michigan	10.44	10.51	10.55	10.37	9.43	8.71	8.54	9.67	10.02	9.72	9.45	9.21	9.19	9.02	8.81	8.33	8.26	7.94	$-2.61	-24.7%
Minnesota	9.71	14.20	13.88	14.53	13.28	11.82	13.07	12.70	13.11	12.82	12.74	13.19	13.38	12.11	11.39	11.02	10.86	10.50	$-3.38	-24.4%
Mississippi	16.12	16.21	18.22	17.59	17.41	15.81	16.80	15.58	17.49	14.20	15.76	14.87	14.43	12.49	12.66	12.43	16.17	15.64	$-2.58	-14.2%
Missouri	8.59	9.02	8.92	8.81	8.80	7.51	6.98	7.37	7.46	7.20	7.35	7.60	7.58	6.36	6.39	6.17	6.57	6.65	-2.27	-25.4%
Montana	11.33	11.62	11.81	11.42	11.01	12.77	12.73	13.22	12.45	10.87	10.54	10.57	10.28	10.81	9.93	8.73	7.74	8.04	$-3.77	-31.9%
Nebraska	10.51	13.00	13.40	12.72	12.16	11.60	11.35	11.91	10.77	10.35	11.10	12.27	13.23	12.26	12.71	11.77	11.64	11.41	$-1.99	-14.9%
Nevada	9.44	10.76	9.81	9.13	8.41	7.35	7.02	6.99	7.78	7.58	7.36	7.94	7.63	8.23	8.17	6.87	6.15	6.46	$-3.45	-34.8%
New Hampshire	4.[illegible]	5.26	4.97	4.65	4.44	3.77	2.93	3.70	3.90	4.09	3.91	3.53	3.25	3.25	3.08	3.20	3.42	3.09	$-1.88	-37.8%
New Jersey	6.73	6.41	6.33	6.23	6.08	5.55	5.31	5.56	7.31	7.14	7.23	6.73	5.74	5.87	5.91	5.93	5.98	6.24	$-0.09	-1.4%
New Mexico	14.40	14.96	16.42	15.78	15.27	16.26	14.83	16.37	16.06	14.37	15.09	15.75	16.71	16.12	16.10	15.98	16.57	16.57	$0.15	0.9%
New York	11.13	10.52	10.52	10.57	10.23	9.96	9.66	10.27	10.02	9.66	9.69	9.21	8.31	6.94	6.63	6.82	6.89	6.06	$-4.46	-42.4%
North Carolina	14.93	15.11	15.91	15.82	15.96	15.41	15.23	16.13	16.13	16.30	15.57	15.71	14.86	13.34	13.58	13.25	13.28	12.71	$-3.20	-20.1%
North Dakota	8.71	13.38	15.14	16.18	13.99	16.14	14.12	13.70	14.68	13.95	13.51	16.34	14.49	15.03	14.70	13.14	13.23	12.73	$-2.41	-15.9%
Ohio	7.09	8.03	7.98	7.93	7.70	7.61	7.41	7.92	8.17	8.41	8.38	8.46	8.51	7.66	7.08	7.08	7.16	7.24	$-0.74	-9.3%
Oklahoma	9.17	10.69	11.02	11.13	11.02	12.59	11.22	10.17	11.08	9.52	10.11	10.49	11.16	11.15	11.30	10.19	9.83	9.56	$-1.46	-13.2%
Oregon	12.08	13.38	13.25	12.62	11.09	9.07	9.61	9.85	10.05	9.73	9.44	9.61	9.36	9.37	9.45	7.81	7.37	7.47	$-5.78	-43.6%
Pennsylvania	8.17	9 39	8.46	8.12	7.39	7.08	5.83	7.23	7.26	6.94	6.98	6.99	6.84	6.67	6.01	6.18	6.18	6.14	$-2.32	-27.4%
Rhode Island	9.99	11.97	10.48	10.23	9.91	9.41	9.16	9.44	8.95	8.88	9.05	8.62	7.88	6.15	6.16	5.62	5.90	5.86	$-4.62	-44.1%
South Carolina	17.06	16.05	16.36	16.31	16.65	14.69	13.82	15.04	15.13	13.66	14.02	13.66	13.47	11.97	11.50	10.18	10.36	10.17	$-6.19	-37.8%
South Dakota	9.98	11.41	11.09	10.54	9.97	8.83	7.81	8.45	7.93	8.85	8.70	9.46	9.34	8.85	9.24	9.22	8.78	8.26	$-2.83	-25.5%
Tennessee	10.05	9.80	11.28	11.15	10.51	9.61	9.14	10.62	11.15	11.09	10.78	10.71	10.25	8.93	9.16	9.06	9.21	8.96	$-2.32	-20.6%
Texas	9.44	13.33	11.94	13.08	12.46	12.85	12.84	12.87	10.97	9.92	9.65	10.68	9.67	9.90	9.37	9.85	9.01	9.05	$-2.89	-24.2%
Utah	16 08	17.34	17.58	16.93	16.35	15.56	14.10	15.54	15.52	14.07	13.60	13.21	13.25	13.21	13.36	12.84	13.25	12.97	$-4.61	-26.2%
Vermont	10.70	8.62	9.41	8.46	8.43	8.38	7.92	7.96	7.60	7.00	6.87	7.03	6.45	5.54	5.38	5.03	4.75	4.78	$-4.63	-49.2%
Virginia	10.31	11.00	12.08	11.24	11.42	10.97	9.84	10.53	10.27	10.27	10.59	10.42	9.34	8.43	7.40	7.03	6.99	6.65	$-5.43	-45.0%
Washington	13.15	14.00	13.81	14.59	12.46	10.47	11.01	10.82	10.59	10.13	10.16	10.32	10.00	9.74	9.31	8.81	8.24	8.33	$-5.48	-39.7%
West Virginia	12.53	12.91	13.31	12.68	12.27	11.81	11.41	12.23	12.27	11.66	12.08	11.42	11.46	11.29	11.05	10.69	10.34	10.50	$-2.81	-21.1%
Wisconsin	15 08	13.94	13.53	13.30	12.76	11.56	11.69	11.46	11.02	10.60	10.42	10.55	10.54	10.02	10.16	9.76	9.81	9.15	$-4.38	-32.4%
Wyoming	14.67	14.74	15.31	14.12	15.79	16.94	16.64	16.45	17.65	17.61	18.43	17.81	17.54	16.93	15.69	14.74	13.87	13.34	$-1.97	-12.9%
All States	$10.36	$11.05	$11.22	$11.16	$10.88	$10.12	$10.45	$10.28	$10.22	$9.68	$9.60	$9.74	$9.39	$8.62	$8.21	$7.96	$7.96	$7.88	$-3.34	-29.8%

The Data

The collection of state tax fund appropriations for operating expenses of higher education from each state was started by Prof. M. M. Chambers of Illinois State University in 1958 and continued by him until his death in 1985. His work has been continued by Prof. Edward Hynes and Gwen Pruyne at the Center for Higher Education at Illinois State University.

The data collected in this survey are published in several places, among them *The Chronicle of Higher Education* in late October (this year October 20), *Grapevine* which is the periodic newsletter of the Center, and by the State Higher Education Executive Officers.

To interpret these data as a measure of social resource allocation, we recalculate state tax funds for operating expenses of higher education *per $1000 of personal income* using recently revised estimates of state personal income as published in the August 1995 issue of the *Survey of Current Business*. The FY1996 state appropriations are divided by CY1994 state personal income for each state.

This manner of presentation leapfrogs two important intervening public policy decisions: state tax effort and state tax resource allocations. Bypassing these two public policy decisions here does not imply lack of interest. Rather these issues are quite complex and have been addressed in other analyses published in past issues of OPPORTUNITY. Particularly with respect to higher education, their net effect is also closely tied to tuition policy, also addressed previously and often in past analyses by OPPORTUNITY.

Unlike the Center's survey report on higher education appropriations, which is not adjusted to reflect subsequent state rescissions and adjustments to state funding, the Bureau of Economic Analysis' estimates of state personal income are revised frequently. Our practice has been to use the most current revision of state personal income to the time of the publication of the state tax fund appropriations for higher education.

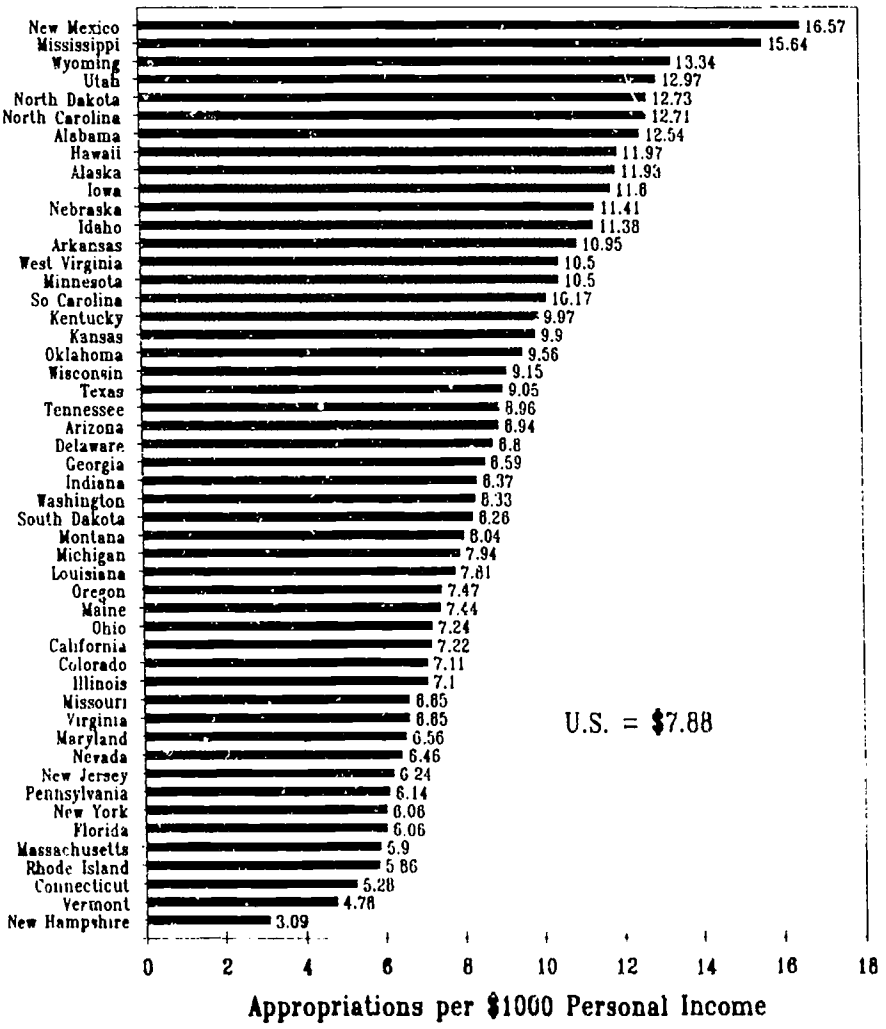
State Analysis

The national total of state tax fund appropriations for operating expenses of higher education per $1000 of personal income is shown on page 9 for the fiscal years 1975 through 1996. This data also appears on the spreadsheet on page 10.

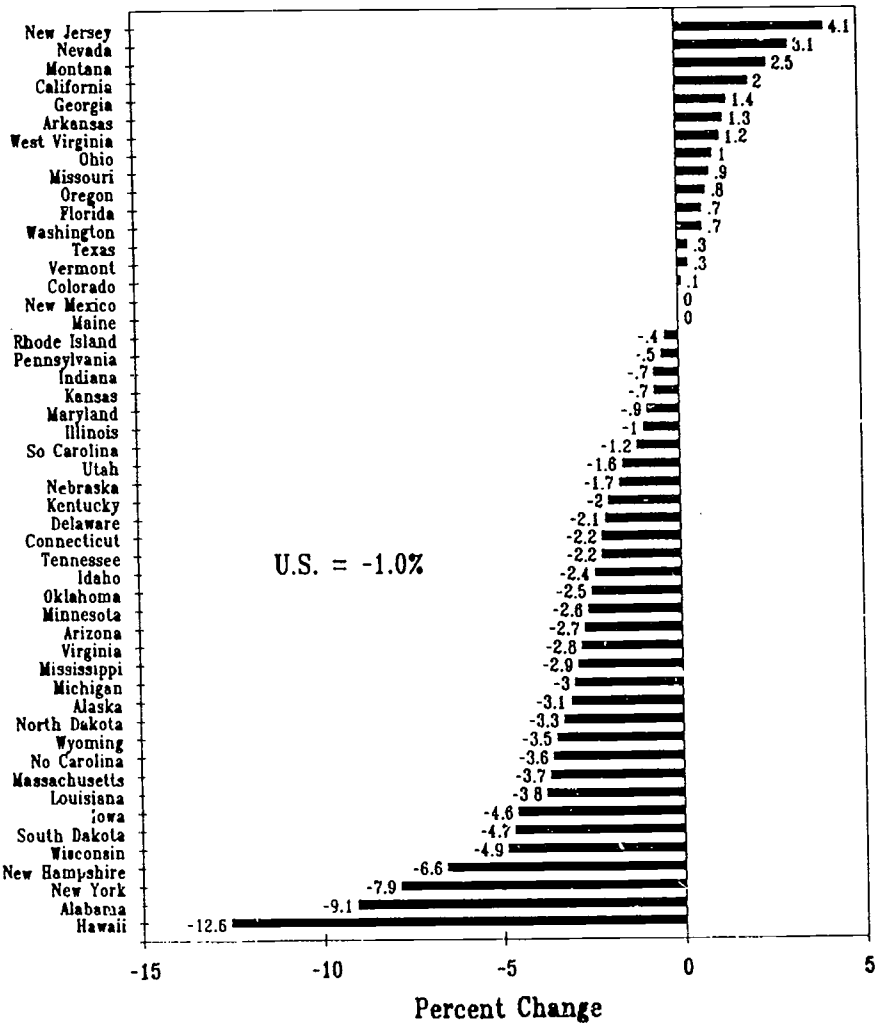
The chart on this page illustrates these data by state for FY1996. For the United States the states appropriated $7.88 in tax funds per $1000 of personal income for FY1996. The range was from $3.09 in New Hampshire to $16.57 in New Mexico.

A great deal of this variation is attributable to the relative role of private higher education in each state, as well as tax effort, allocation priorities and tuition expectations from

Appropriations of State Tax Funds for Operating Expenses of Higher Education per $1000 of Personal Income FY1996



Change in State Appropriation of Tax Funds for Higher Education per $1000 of Personal Income Between FY1995 and FY1996



students. For example, while the bottom five states in this ranking are all in New England, the combined expenditures of public *and private* higher education as a proportion of gross state product are higher in New England than they are in any other region of the country.

For this reason, we are less interested in this *interstate* comparison of state tax funds appropriated for higher education than we are in the following *intrastate* of social investment in higher education comparisons over time.

Changes in State Appropriations

Between FY1995 and FY1996, total state tax fund appropriations for the operating expenses of higher education declined from $7.99 to $7.88 per $1000 of personal income, or by 1.0 percent. The FY1996 total of appropriations was the lowest on record for the last 20 years.

Increases were reported in 15 states, decreases were reported in 33 states, and no change was reported in 2 states.

The largest increases were reported for **New Jersey, Nevada, Montana** and **California.** These increases ranged from 2.0 to 4.1 percent. Each of these states has a historical context that helps explain the increase:

- **New Jersey** has for many years acted as if it were cheaper for its citizens to go to some other state to get their higher educations. Out migration to attend college is far greater from New Jersey than it is from any other state. In more recent years state policy appears to be trying to reverse these patterns.
- For all its advertised claims to the contrary, **Nevada** provides little support for higher education and never has. A little change on a modest base looks bigger than it is, although the FY1996 effort is hopeful.
- **California** has so butchered its public higher education appropriations between FY1980 and FY1994 that almost any tiny funding recovery looks good by comparison.

The state higher education appropriations suffering the largest reductions between FY1995 and FY1996 were **Hawaii, Alabama, New York, New Hampshire, Wisconsin, South Dakota** and **Iowa.**

As shown in the table on page 10, for all 50 states state tax fund appropriations for operating expenses of higher education increased between FY1975 and FY1979, and have been declining ever since. State commitment to higher education funding did not peak in FY1979 in each state, but we will use that year as a reference to compare changes over a longer period of time, specifically between FY1979 and FY1996. That chart appears on the following page.

Between FY1979 and FY1996, state tax fund appropriations per $1000 of personal income for the operating expenses of higher education declined

by 29.8 percent. They declined in 49 of the 50 states.

The lone exception is New Mexico. In FY1996 New Mexico provided the highest level of state tax fund support for higher education, 210 percent of the national average, among the 50 states. Moreover, New Mexico uniquely among the 50 states has managed to maintain this very high level of state investment over the last 17 years while every other state has cut back in social resource investment in higher education.

In the remaining 49 states, state tax funding of higher education operations were reduced by as much as 49 percent between FY1979 and FY1996.

- The largest losses--greater than 40 percent--were in **Vermont** (-49.2%), **California** (-46.4%), **Virginia** (-45.0%), **Rhode Island** (-44.1%), **Colorado** (-43.8%), **Oregon** (-43.6%), and **New York** (-42.4%).

New York has replaced Washington on the list of states that have reduced social resource investment in higher education by more than 40 percent between FY1979 and FY1996.

Summary

It is important to point out here that the reductions in social resource investments in higher education reported here reflect *choices* made by governors and legislators. When the control for state personal income is introduced to the state appropriations data, one can no longer argue that states lack resources to appropriate to higher education. The resources are there in the form of personal income. State political leaders have *chosen* either not to tax them and/or not to appropriate them for higher education.

Analyses of tax effort and expenditures, particularly over time, have been reported regularly in past issues of OPPORTUNITY and will continue to be reported in the future. What these analyses find, consistently, is that:

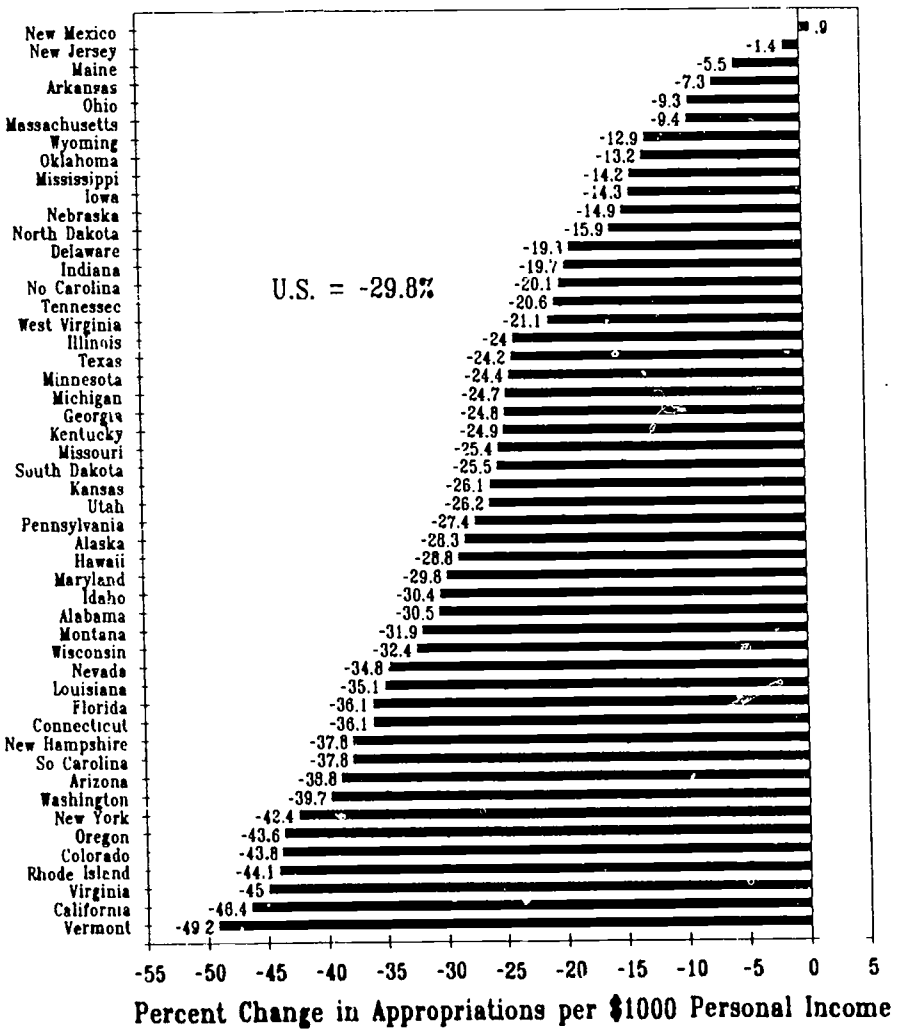
- Americans do not like to pay taxes, and
- Higher education ranks about last in what elected leaders like to spend tax monies on.

While the rest of the industrial world has been willing since 1980 to increases taxes to address social needs, the United States almost uniquely has not. Taxes take the same bite out of gross domestic product here and now that they did in 1980.

The spending priorities in the states continue to be corrections and Medicaid.

This scenario places an extraordinary squeeze on higher education funding generally, and tuition charges paid by students in particular. The trajectories of these shifts are perfectly clear over the last 17 years. Unless and until voter willingness to pay more taxes and/or higher education's state budget priority improves, higher education must plan to continue to receive a declining share of social resources for its educational missions.

Change in Appropriations of State Tax Funds for Operating Expenses of Higher Education per $1000 of Personal Income Between FY1979 and FY1996



Think about This for a While . . .

In 1994 the Gallup Organization and Independent Sector published results of a national survey of Americans' levels of confidence in various institutions. Survey respondents were asked to indicate their levels of confidence in each institution. The levels were "a great deal," "quite a lot," "some," "very little" and "can't say." The following chart ranks the institutions included in the survey according the proportion responding "a great deal."

Mainly we note the relatively very high regard Americans have for education, particularly higher education, and even private higher education. This high regard seems to be at odds with steadily declining social investments made by government--state and federal--since the end of the 1970s. We leave to others the interpretation of the levels of confidence assigned to others farther down this list.

(A more complete version of these data is reported in the *Digest of Education Statistics 1995* published by the National Center for Education Statistics, October 1995. See page 33.)

Source Gallup, "Giving and Volunteering in the U S , 1994 "

The Oregon Family Resource Study

The state budget situation in Oregon has resulted in sharp state funding reductions for public higher education in Oregon since the late 1970s (see p. 10). In response the Oregon State System of Higher education initiated an income study of undergraduate students and their families to determine their ability and willingness to pay for college. Oregon's Independent College Association and Community College System joined to sponsor the study. The following is the study's Executive Summary.

The Oregon Family Resource Study concerns the economic backgrounds of state residents attending Oregon colleges and universities. Based on surveys from more than 7,100 families, this research was developed to help clarify the impact of current funding policy and implications for future funding.

The social characteristics of dependent students attending Oregon's public and private four-year institutions are highly similar in terms of parent education attainment, family incomes, and family composition. In 1992 median family income of dependents at OSSHE institutions was $47,210 compared with $45,734 at private colleges. While the family income of community college dependents was lower, they represent predominantly middle-class as well, with a median family income of $40,097. Independent students represent a more diverse population with family incomes that reflect pronounced differences in student age and family composition. For independents attending OSSHE institutions, the 1992 median family income was $14,190 compared with $27,900 at private colleges and $18,895 at community colleges.

For comparison, the estimated 1992 statewide median for all families with a household head of comparable age (45-54) was $42,450, and $32,114 for all Oregon households. For dependents and independents combined, the 1992 median income of OSSHE, private college and community college families are $34,332, $38,957 and $29,708 respectively.

Few dependents are the first generation in their family to attend college. At four-year institutions, only one in ten parents of dependents have not had some college compared with 39 percent for the state, which challenges our hopes and expectations that families from all educational backgrounds are equally represented. Among independents, the proportion of first generation students conforms more closely with the state population and points to the importance of adult education for ensuring that individuals from all backgrounds have access to college.

Oregon's three systems of higher education represent distinct funding environments, with average prices (self-reported average prices include tuition, fees, room and board, and expenses) for full-time dependents who do not live at home of $8,856 at OSSHE institutions, $16,124 at private colleges and $4,620 at community colleges. The provision of grant aid (from public and private sources) substantially reduces the average price of attendance in all three sectors and is particularly effective for low- and moderate-income families (under $35,000). For full-time dependents attending OSSHE institutions, grant aid on average lowers attendance costs by 12 percent, compared with 32 percent at private institutions and 13 percent at community colleges. Grant aid also greatly reduces the price differences between sectors. After receipt of grant aid, the average price difference between OSSHE and private colleges falls from $8,305 to $2,523 for a low-income (under $20,000) dependent and from $9,418 to $4,989 for a middle-income ($35,000-$49,999) dependent.

Despite significant grant aid, families at all income levels represent the primary underwriter of attendance costs. For dependents, responsibility for meeting costs are evenly split between the students and their parents, with student responsibility rising as family income decreases. At the same time, neither student nor parents adequately prepare for college.

Less than 38 percent of all parents save for college and less than 25 percent of all dependents contribute to their education through some form of savings. Given this level of participation and minimum reliance on current income to help fund expenses, loans represent a large and increasingly critical funding component for college. Nearly 50 percent of all OSSHE, 70 percent of all private college and 25 percent of all community college students borrow to help pay for college, and as family income declines, the incidence of borrowing and levels of debt tend to rise.

Under current policy, low- and moderate-income (under $35,000) families still face the highest burden of responsibility relative to family resources. This burden is reflected in the incidence of borrowing, sacrifice of current income, and hours of student employment. While middle-income ($35,000-$49,999) families are large borrowers as well--and in the case of private colleges demonstrate

the highest loan levels of any group--that burden must be considered in light of the limited effort middle-income families demonstrate to save for college or sacrifice current income.

Low and moderate income (under $35,000) parents of dependents attending public or private four-year colleges exhibit nearly identical levels of support regardless of sector, while middle-income ($35,000-$49,999) parents with dependents attending private colleges contribute nearly $2,700 more than their public sector counterparts. These differences in parental effort help explain the observed similarity in income distributions between public and private four-year institutions, despite a large gap in tuition. Overall, comparatively few parents fail to contribute either through loans, savings or income towards their children's education, and family contributions in general meet or exceed federal expectations across all incomes. While this behavior is perhaps expected, it is an important confirmation of parental commitment towards postsecondary education in Oregon.

For dependents, an increase in attendance costs would be borne both by parents and students, with students assuming greater responsibility overall. Moreover, as family incomes decrease, student responsibility rises. In terms of type of support (current versus future income), reliance on loans would nearly double from 17 percent today to nearly 31 percent of all additional costs. For independents, reliance on loans would be even greater, with 50 percent of each new dollar in costs met through debt rather than savings or current income. Independents were also more likely to reduce course loads to help offset additional costs and extend their time to completion.

Faced with a specified cost increase and no additional grant aid, 54 percent of all OSSHE, 55 percent of all private college and 42 percent of all community college families would take some other course of action rather than pay the increase. For all three sectors, families with incomes above $65,000 were the most likely to remain at their current institutions and pay the additional cost.

Among those who would not pay the increase, almost all families at four-year institutions would instead attend a lower cost institution, with a large movement of public and private students to community colleges (36 and 24 percent respectively) and from private institutions to OSSHE institutions (17 percent).

The study was prepared by Human Capital Research of Chicago. Copies of the complete report may be available by calling (312) 342-0440.

Postsecondary Education
OPPORTUNITY

The Mortenson Research Letter on Public Policy Analysis of Opportunity for Postsecondary Education

Number 42 | Iowa City, Iowa | December 1995

Seeking financial help . . . *. . . to attend college*

Applicants for Title IV Federal Student Financial Aid

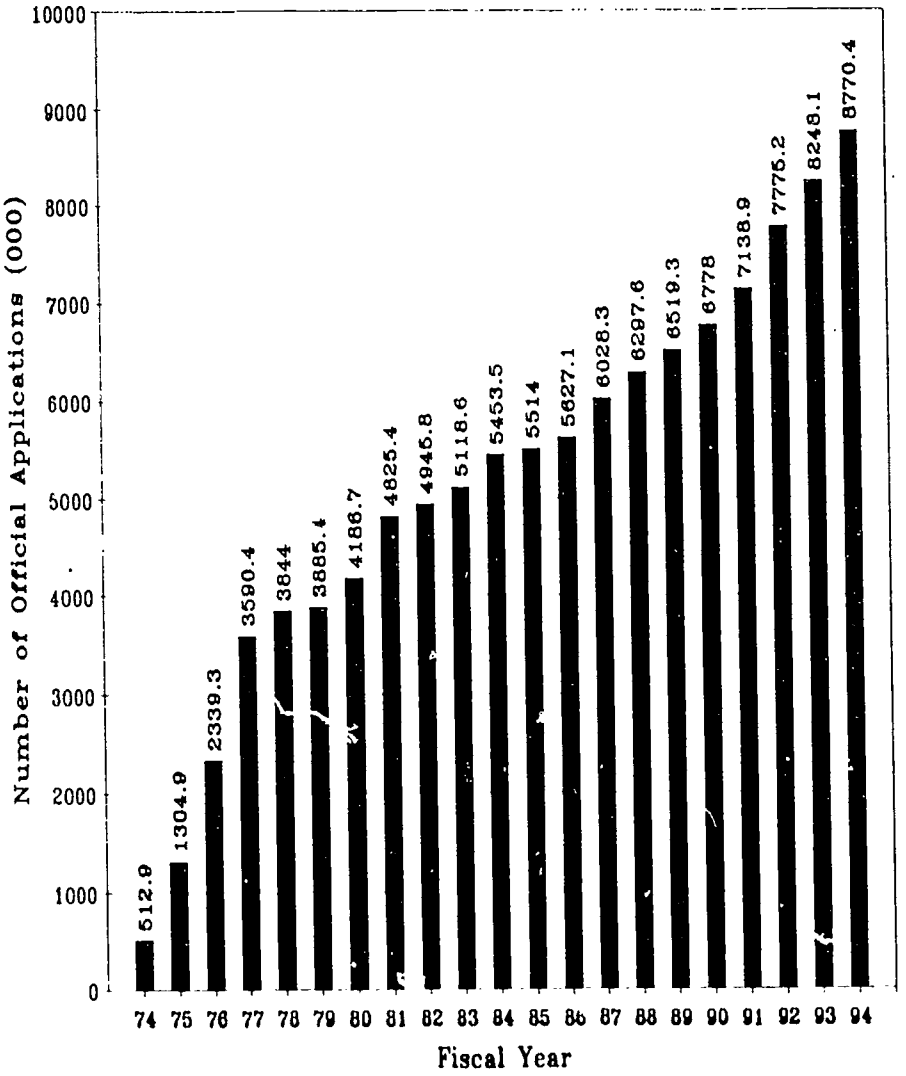
For the 1993-94 academic year, 8,770,409 students applied for federal student financial aid to help pay college attendance costs. Expressed another way, of the 15.3 million postsecondary students in the fall of 1993, 57 percent sought help to pay for some or all of their tuition, fees, books and supplies, food, housing, transportation, personal and medical care while enrolled in a postsecondary institution.

Of these 8.77 million official applications, 8.5 million were valid (completed), 5.4 million were eligible to receive federal Pell Grants, and 3.8 million applicants actually received Pell Grants.

In this analysis we examine data prepared by National Computer Systems (federal contractor) and submitted to the U.S. Department of Education on applicants for federal Title IV student financial aid for the 1993-94 award year.

National Computer Systems. *1993-94 Title IV/Federal Pell Grant Program End-of-Year Report.* Washington, DC: U.S. Department of Education.

Applicants for Title IV Federal Student Financial Aid
FY1974 to FY1994



States and institutions also use data collected on the federal application to allocate their financial aid (although supplemental forms may also be used to collect additional information for state and institutional financial aid awards). Thus, nearly all applicants for financial aid to attend postsecondary education are included among the nearly 8.8 million applicants for federal Title IV student aid applications.

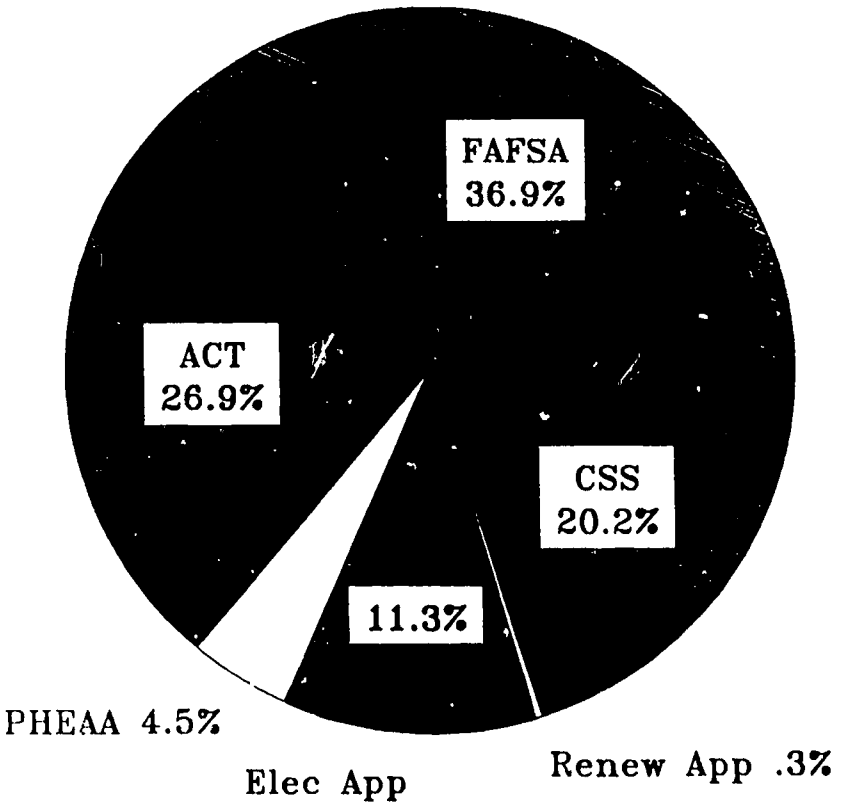
Applications by Source

Applicants for federal student financial aid could apply in several ways. Applicants could submit applications to one of three Multiple Data Entry processors: American College Testing (ACT) Program, College Scholarship Service (CSS) or the Pennsylvania Higher Education Assistance Agency (PHEAA). Or a student could apply on the Free Application for Federal Student Aid (FAFSA) submitted directly to the Central Processing System via an electronic Application or electronic Renewal Application Process.

Applications from any source go through the identical federal formulas to determine expected family contributions and Pell eligibility. However, applicants from different sources qualify for Pell Grants at different rates. These differences are the result of differences in the demographics of the populations using each application source. For example, applicants using the College Scholarship Service are eligible for Pell Grants at the lowest rate, 50.2 percent, while those using renewal applications qualify at a rate of 93.8 percent.

Similarly, eligible Pell Grant applicants claim their awards at differing rates. Those using the Free Application for Federal Student Aid claim their awards at the lowest rate,

Applicants by Application Source
1993-94



Official Applications = 8,770,408

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Mission Statement

This research letter is founded on two fundamental beliefs. First, sound public social policy requires accurate, current, independent, and focused information on the human condition. Second, education is essential to the development of human potential and resources for both private and public benefit. Therefore, the purpose of this research letter is to inform those who formulate, fund, and administer public policy and programs about the condition of and influences that affect postsecondary education opportunity for all Americans.

67.3 percent, probably because they have not enrolled in postsecondary education. Those filing renewal applications claim their Pell Grants at the highest rate at 93.0 percent.

Federal Title IV Student Aid

The federal student financial aid programs included under Title IV of the Higher Education Act of 1965 are:

Pell Grant Program: Pell Grants are usually packaged as the first form of financial aid. They follow the Expected Family Contribution from need analysis in financing the student's college budget. Pell Grants ranged in size from $400 to $2300. They are targeted on students from the lowest family incomes--roughly the bottom quartile of the dependent family income distribution.

For 1993-94 5,382,698 Title IV applicants were eligible to receive Pell Grants. Of this total, 3,755,675 received them on enrolling in an eligible postsecondary institution. They received a total of $5,654,453,265 in Pell Grants, or an average of $1506 each.

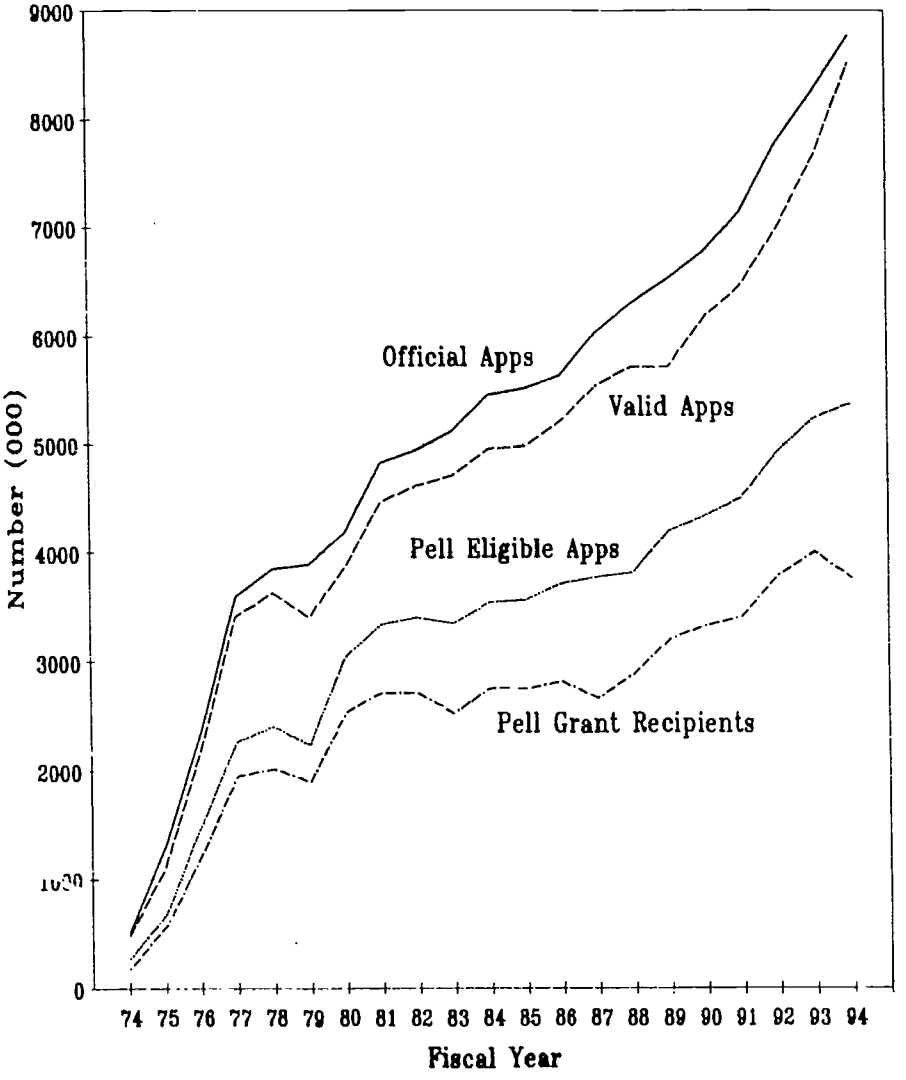
Federal Family Education Loan Programs: Formerly known as Guaranteed Loans, FFELs include Stafford Loans, PLUS Loans, and SLS Loans. Loan funds come primarily from commercial lenders, are guaranteed by state or private non-profit guaranty agencies and reimbursed by the federal government. Loans provide more dollars to students than all other federal Title IV programs combined.

Stafford Loans are used by undergraduate and graduate students. In 1993-94 4.495 million loans were issued for $13.5 billion, or an average of $3001 each.

PLUS Loans are available to parents with good credit histories for the education of their dependent children who are enrolled at least half-time. For 1993-94 344,000 PLUS loans were made to parents totaling $1.3 billion, at an average of $3817 each.

Supplemental Loans to Students (SLS) are available to all independent and graduate students, and to dependent graduate students in certain cases. In 1993-94 808,000 SLS loans were made totaling $3.06 billion, or an average of $3789 each.

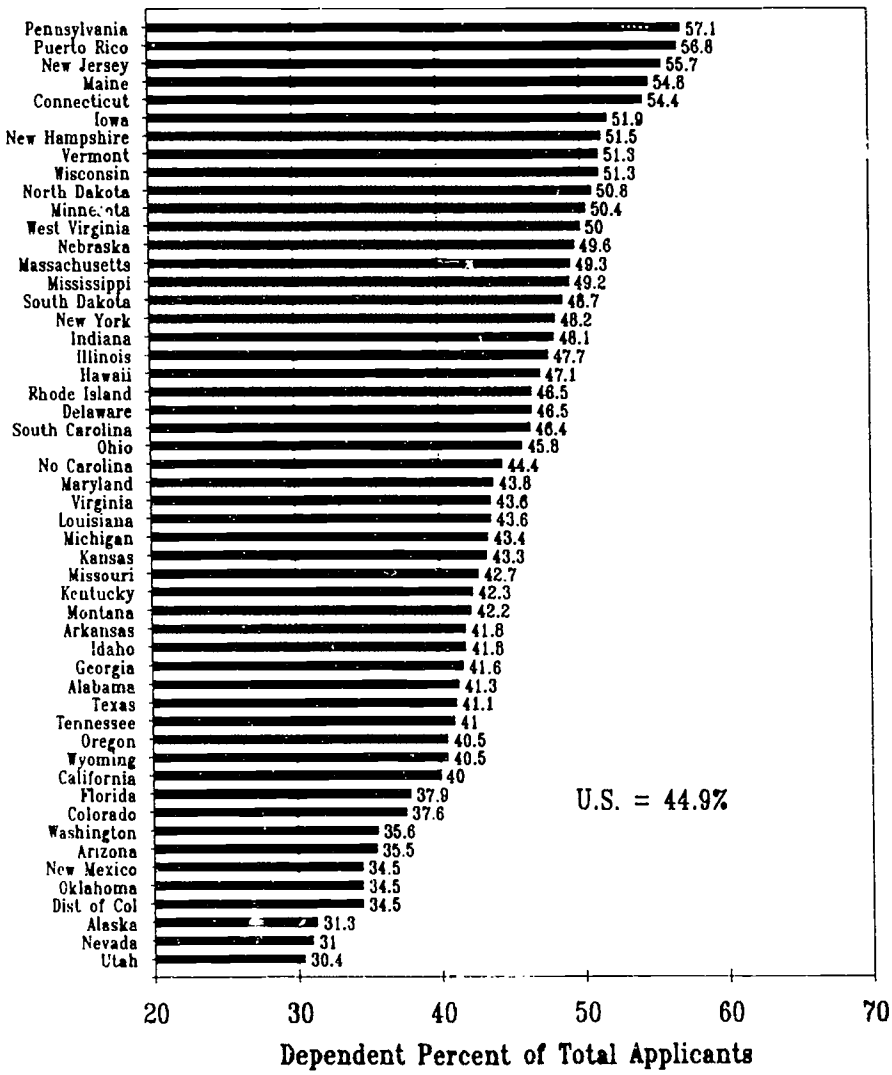
Title IV Applicants and Pell Grant Recipients FY1974 to FY1994



Supplemental Educational Opportunity Grant Program: The SEOG Program provides grants to undergraduate students with exceptional financial need. In 1993-94 1,068,102 students were awarded $752.7 million, or an average of $705 each.

Perkins Loan Program: These loans are administered by institutions with federal capitalization to undergraduate and graduate students. They are low-interest and long-term. During 1993-

Dependent Title IV Applicants by State 1993-94



State/Jurisdiction	Applications
Alabama	140,139
Alaska	15,035
Arizona	129,715
Arkansas	75,277
California	901,168
Colorado	130,337
Connecticut	88,775
Delaware	17,638
District of Columbia	17,175
Florida	393,224
Georgia	218,871
Hawaii	21,460
Idaho	39,824
Illinois	383,074
Indiana	194,736
Iowa	115,018
Kansas	92,381
Kentucky	123,253
Louisiana	158,899
Maine	41,568
Maryland	139,328
Massachusetts	215,934
Michigan	352,716
Minnesota	183,140
Mississippi	95,818
Missouri	171,743
Montana	36,640
Nebraska	65,539
Nevada	26,494
New Hampshire	35,128
New Jersey	228,593
New Mexico	65,585
New York	763,986
North Carolina	168,113
North Dakota	30,247
Ohio	372,511
Oklahoma	123,817
Oregon	106,431
Pennsylvania	399,009
Puerto Rico	221,305
Rhode Island	37,669
South Carolina	110,701
South Dakota	31,567
Tennessee	147,604
Texas	540,405
Utah	77,106
Vermont	21,184
Virginia	182,497
Washington	166,798
West Virginia	54,225
Wisconsin	162,175
Wyoming	18,940
All others	119,894

94 684,730 students received $918.7 million or an average of $1342 each in Perkins Loans.

College Work-Study Program: These funds are used by students in part-time employment to help finance college attendance costs. In 1993-94 711,906 students received $771.4 million, or an average of $1084 each.

Title IV Applicants by State

The number of official Title IV financial aid applications by state of residence of the applicant was 8,770,409. They were distributed by state and other jurisdictions as shown in the column to the right.

A majority of these applicants--55.1 percent--were *independent*. That is, they were 24 years or older, or a military veteran, or an orphan or ward of the court, or have legal dependents, or a graduate or professional student who declared that they would not be claimed by their parents as dependents, or be determined by a financial aid administrator to be independent by documented special circumstances.

The chart on the previous page shows the proportion of official applicants who were *dependent* by state in 1993-94. The proportion ranged from 30 percent in **Utah** to 57 percent in **Pennsylvania**.

Dependent Applicants

Dependent applicants are the traditional undergraduate four-year college and university population: mostly 18 to 23 years old, fresh out of high school, usually pursuing four-year degrees in four-year colleges or universities although some are found in two-year colleges too.

Most important for financial aid need analysis, they are still dependent on their parents for financial support. Need analysis examines their parental resources to calculate an expected parental contribution to the financing of the applicant's postsecondary education. After the parents' and applicant's income and assets are assessed to determine an Expected Family Contribution (EFC), the remaining difference between college attendance costs and EFC is the applicant's financial need. That need is packaged with grants, loans and earnings from employment to complete the financing of the applicant's college budget.

Federal financial aid is targeted on needy students. And federal Pell Grants and Supplemental Grants in particular are targeted on low family income students. In 1993-94 about one-third of all dependent Title IV applicants came from families with incomes below $20,000. This corresponds closely to the bottom quartile of family income for all high school graduates.

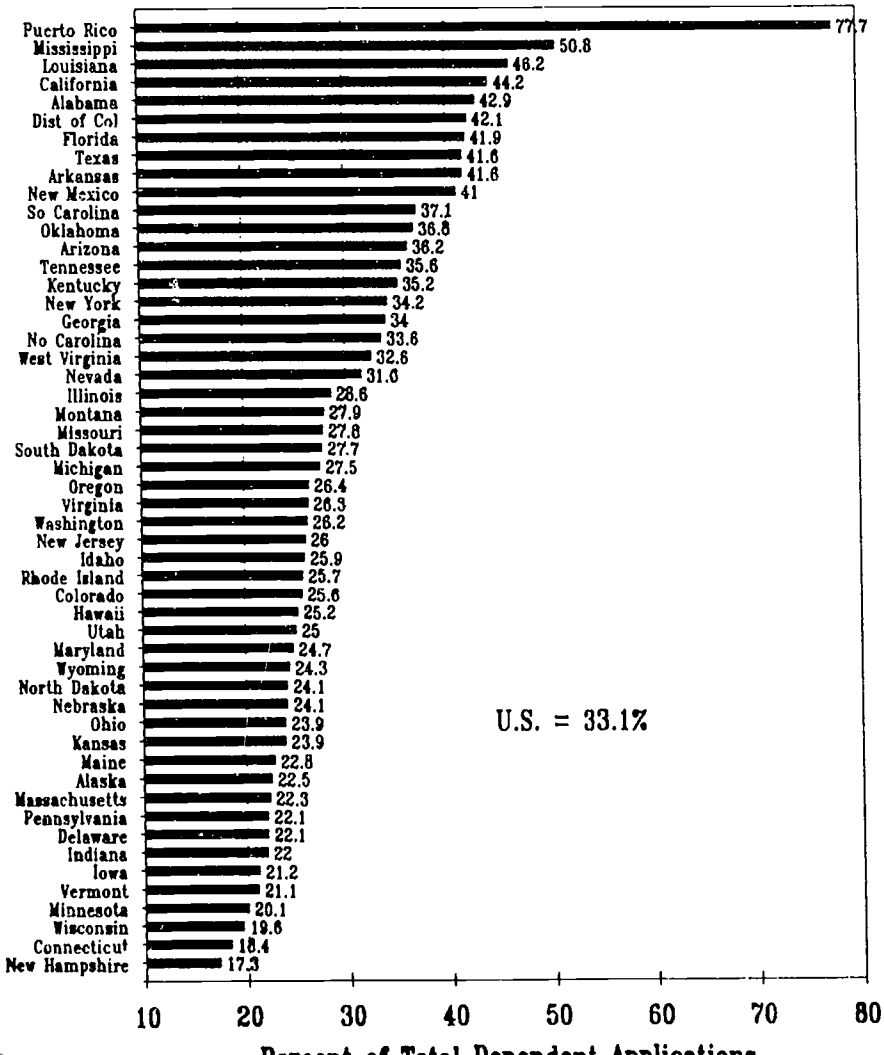
The proportion of each state's dependent applicants from families with incomes below $20,000 per year ranged from 17.3 percent in New **Hampshire** to 77.7 percent of Title IV applicants from **Puerto Rico**. Generally speaking states with the smallest proportion of dependent applicants from families earning less than $20,000 per year were northern states, and states with the highest proportion were southern states.

Another way of looking at these data is to examine the proportion of dependent Pell Grant recipients who receive the maximum allowable Pell Grant. Over time:

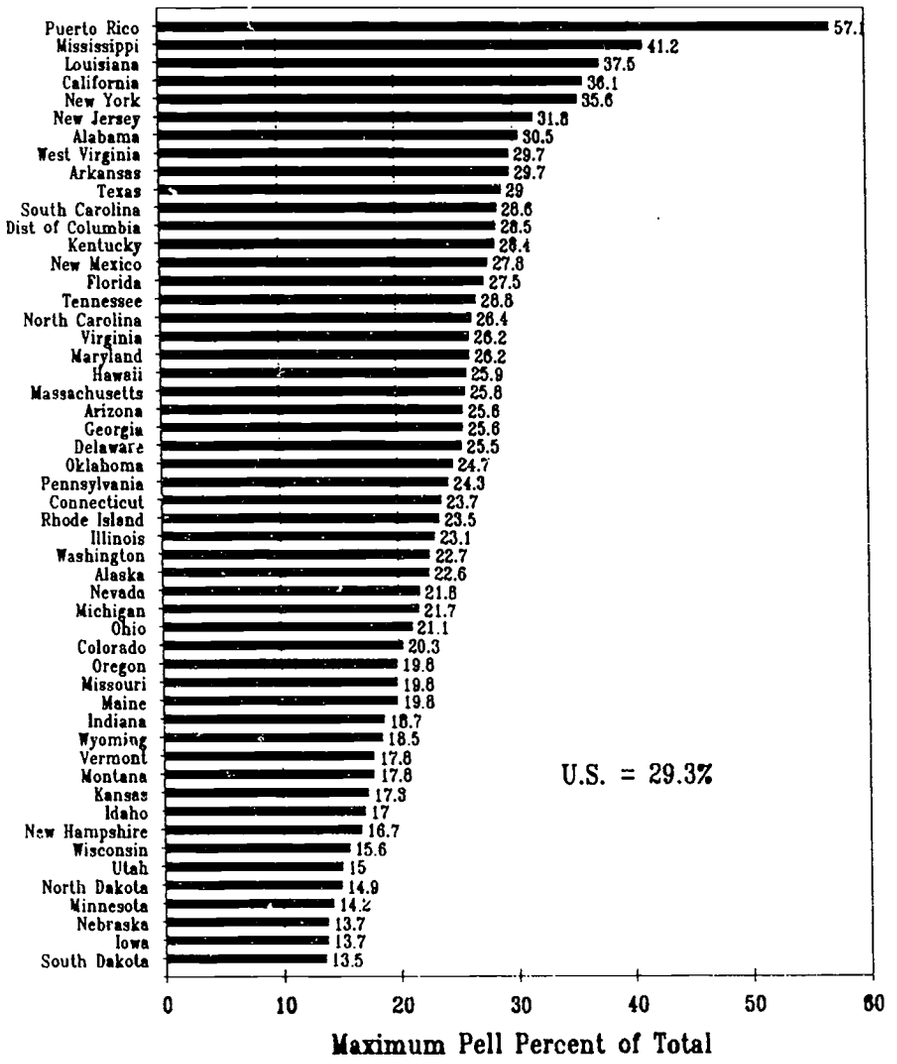
Fiscal Year	Number	Percent of Total
1978	85,920	7.6%
1979	74,809	6.4%
1980	69,896	4.2%
1981	92,269	5.7%
1982	103,206	6.6%
1983	112,385	8.2%
1984	142,784	9.8%
1985	120,490	8.5%
1986	147,307	10.5%
1987	164,060	13.4%
1988	156,737	12.8%
1989	149,806	11.1%
1990	156,472	11.5%
1991	179,030	13.3%
1992	192,329	13.2%
1993	222,477	14.7%
1994	448,720	29.3%

In 1993-94 the maximum Pell Grant

Dependent Applicants from Family Incomes below $20,000 1993-94



Dependent Pell Grant Recipients at Maximum Grant ($2300) 1993-94



was $2300. In 1993-94 29.3 percent of all Pell Grant recipients received the maximum allowable Pell Grant. However, this proportion varied widely across states, from 13.5 percent of all dependent Pell Grant recipients in **South Dakota** to 57.1 percent in **Puerto Rico**.

Independent Applicants

In FY1978 38 percent of all Pell Grant recipients were financially independent of their parents. By FY1994 this proportion had increased to 59 percent. These older students have come to dominate enrollments in higher education, applicants for Title IV student financial aid, recipients of Pell Grant awards and Pell Grant dollars over the last fifteen years.

Because independents do not report their parents' incomes, the family incomes of independent applicants are much lower than are the family incomes of dependent applicants. For 1993-94, median family income for dependent Title IV applicants was $30,523, compared to $9189 for independent applicants for student financial aid.

In 1993-94 about 36 percent of all independent aid applicants had family incomes below $6000. By state this proportion ranged from 23.9 percent in **Vermont** to 61.5 percent in **Puerto Rico**. Several of the largest states, such as **New York, Illinois, Ohio** and **Pennsylvania** reported very large numbers of independent applicants with family incomes below $6000. States with the smallest percentages of independent applicants with family incomes below this figure tended to border Canada.

Like dependents, the proportion of independent Pell Grant recipients receiving the maximum allowable Pell Grant has increased steadily and substantially over the last 15 years.

Fiscal Year	Number	Percent of Total
1978	56,676	8.0%
1979	50,958	7.6%
1980	76,821	9.0%
1981	113,547	10.3%
1982	144,110	12.7%
1983	151,212	13.1%
1984	207,828	15.9%
1985	185,647	13.9%
1986	244,905	17.3%
1987	292,358	20.4%
1988	335,009	20.2%
1989	404,568	21.8%
1990	421,549	21.5%
1991	476,210	23.1%
1992	551,210	23.7%
1993	619,596	24.9%
1994	655,734	29.5%

Summary and Conclusions

The federal Title IV financial aid application system initiates a system that ultimately leads to the awarding of $46.8 billion in federal, state and institutional financial aid to students according to data reported by The College Board. Nearly all of this aid--except military benefits and merit scholarships--is awarded to students on the basis of financial need calculated from information supplied by

students on any of the several aid application forms approved for use.

The financial aid application system of Title IV is truly massive. Nearly 8.8 million Americans submitted official applications for financial aid. (An additional 201,000 submitted unofficial applications.) One out of every 22 Americans 18 and over submitted an official Title IV application for aid.

The 8.77 million official Title IV applications are reduced to 8.52 million when incomplete applications are unresolved, and further to 6.89 million applications when Pell eligible non-claimants are deducted. Of these 6.89 million applicants:

- 3.75 million received federal Pell Grants
- 4.495 million received federal Stafford Loans
- .344 million received federal PLUS Loans
- .808 million received federal SLS Loans
- .685 million received federal Perkins Loans
- .712 million received federal College Work-Study earnings
- 1.068 million received federal Supplemental Educational Opportunity Grants
- 1.627 million received state-funded need-based monetary awards
- An additional unknown number received institutionally awarded grants and scholarships

Each of the 6.89 million aid applicants received an average of 1.7 federal financial aid awards in 1993-94, plus an addition .2 state awards.

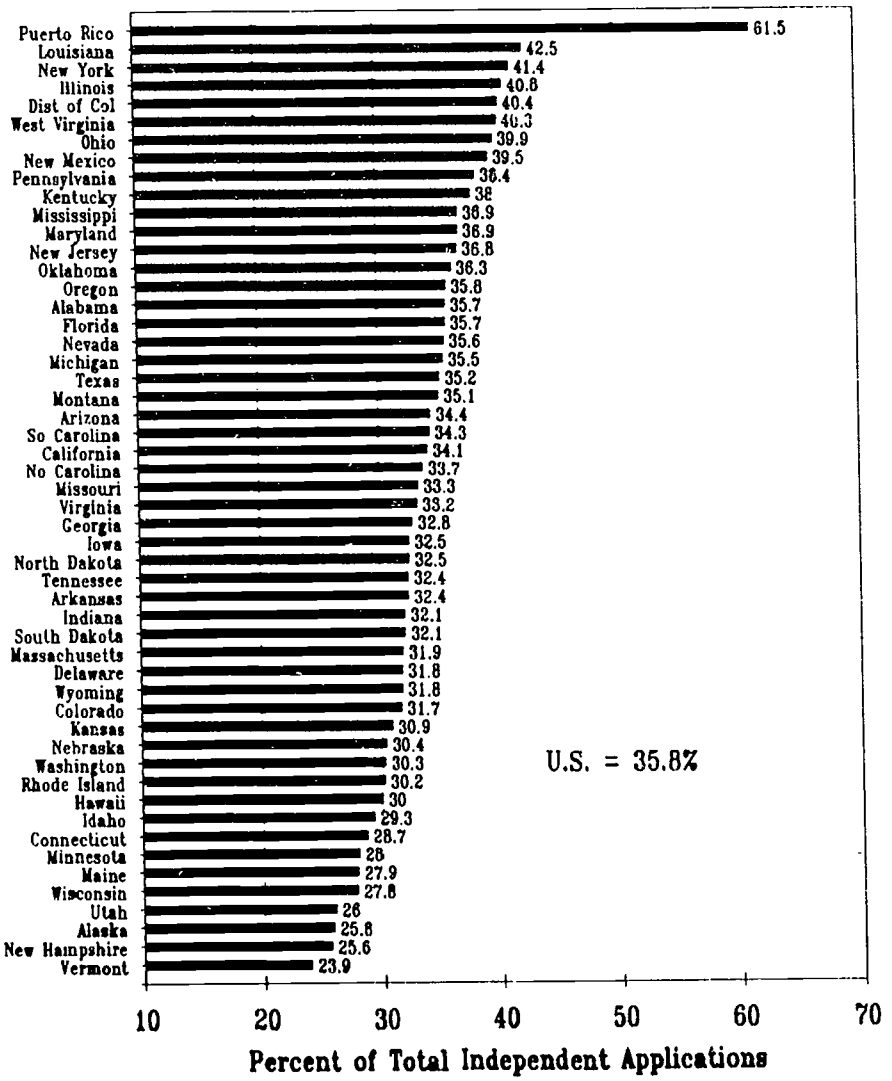
Each dependent and independent Title IV financial aid applicant completes identical questions depending on their status on one of several federal or private financial aid forms to enter the system. When the application is complete, the application data is processed through federal formulas for dependent and independent applicant situations to determine an Expected Family Contribution.

The resulting EFC is deducted from the cost of attending college to determine financial need. This need is then met through grants, scholarships, loans and earnings to enable the applicant to pursue his or her intended year of postsecondary study.

This standardized system allocates federal student financial aid dollars according to demonstrated financial need. Unlike state funding of higher education, only about 7 percent of which is targeted on financially needy students, nearly all federal funding for the education of students is targeted on financially needy students.

This system also has redistributional effects, from federal taxpayers to needy students, and from states that pay more in federal taxes than they receive in federal benefits to states that pay less in federal taxes than they receive in federal benefits. This redistributional aspect is central to announced federal policy objectives to equalize postsecondary education opportunities for students from needy low- and middle-income families.

Independent Applicants from Family Incomes below $6000 1993-94



Is college still worth it? *For whom?*

Private Economic Benefits and Costs of Baccalaureate Education, 1975 to 1994

Since 1980 college attendance costs have increased much faster than inflation, nearly 5 percent beyond the Consumer Price Index for each of the last 15 years. This price run-up has occurred while family incomes have remained essentially flat, and in fact have declined in CPI adjusted dollars since 1989.

This increase in college attendance costs far beyond family incomes and financial aid has clearly created a most serious problem of college affordability. If family incomes plus financial aid cannot keep up with the increases in college attendance costs, then a growing share of the population will be unable to make college access, choice and persistence enrollment decisions without regard to their limited financial resources.

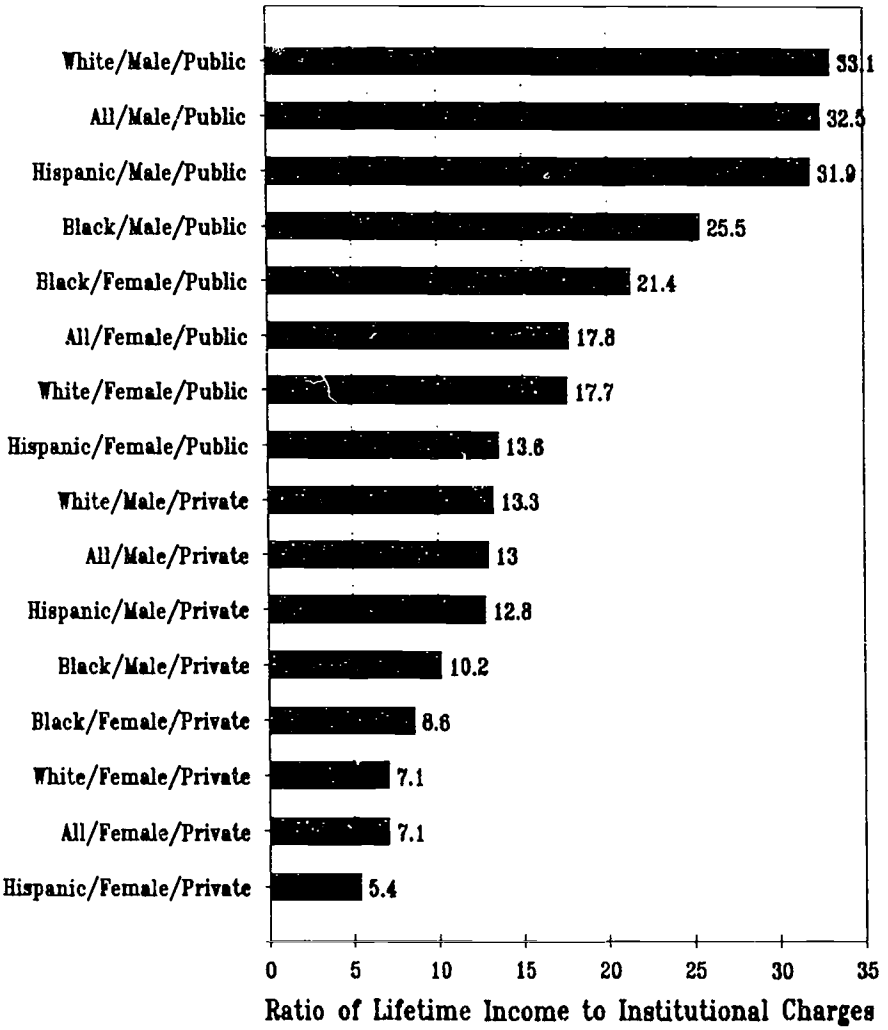
However, the economic returns to a baccalaureate level education compared to a high school education have also grown since the early 1970s.

- *In 1950 a male 25 to 34 years old with a bachelor's degree earned 13 percent more than did another male with a high school diploma.*
- *By 1971 the college graduate earned 27 percent more.*
- *By 1981 the college graduate earned 34 percent more.*
- *By 1990 the college graduate earned 47 percent more.*
- *By 1994 the college graduate earned 65 percent more than the high school graduate.*

We find similar growth in the income advantage of families headed by college graduates compared to families headed by high school graduates.

- *Between 1956 and 1981, families headed by persons with a bachelor's degree earned about 40 percent more than did families headed by persons with a high school diploma.*
- *In 1982 this jumped to 50 percent.*
- *By 1990 the advantage was 63 percent.*
- *By 1993 the income advantage was 77 percent.*

Lifetime Income/Institutional Charges Ratios
by Race/Ethnicity, Gender and Institutional Control
1994



In this analysis we compare college attendance costs not to the parental income of the student (which addresses the affordability issue), but to the lifetime income advantage of the student with a bachelor's degree compared to the lifetime income of a person of the same gender and race/ethnicity with a high school

diploma. We also make the comparison for both public and private colleges. Our analysis covers the twenty years from 1975 to 1994.

In a more complex form, a more extensive benefit/cost analysis would produce an estimate of the private rate of return on a college investment decision. The complexity would result from the addition of costs not included here (other college attendance costs, foregone income, financing costs for those using loans, risk factors, etc.), offsets to cost for financial aid, some addition for non-pecuniary quality-of-life benefits of being college educated, and the discounting of all future values to present values. Such estimates are important to individuals and families evaluating alternative investments to choose the one that produces the greatest net benefit to the investor.

However, such is not our purpose here. In this analysis we are simply interested in the relationship between the run-up in college attendance costs since 1979 and the run-up in the lifetime income advantage of college graduates compared to high school graduates during about the same period of time.

The questions we address are:

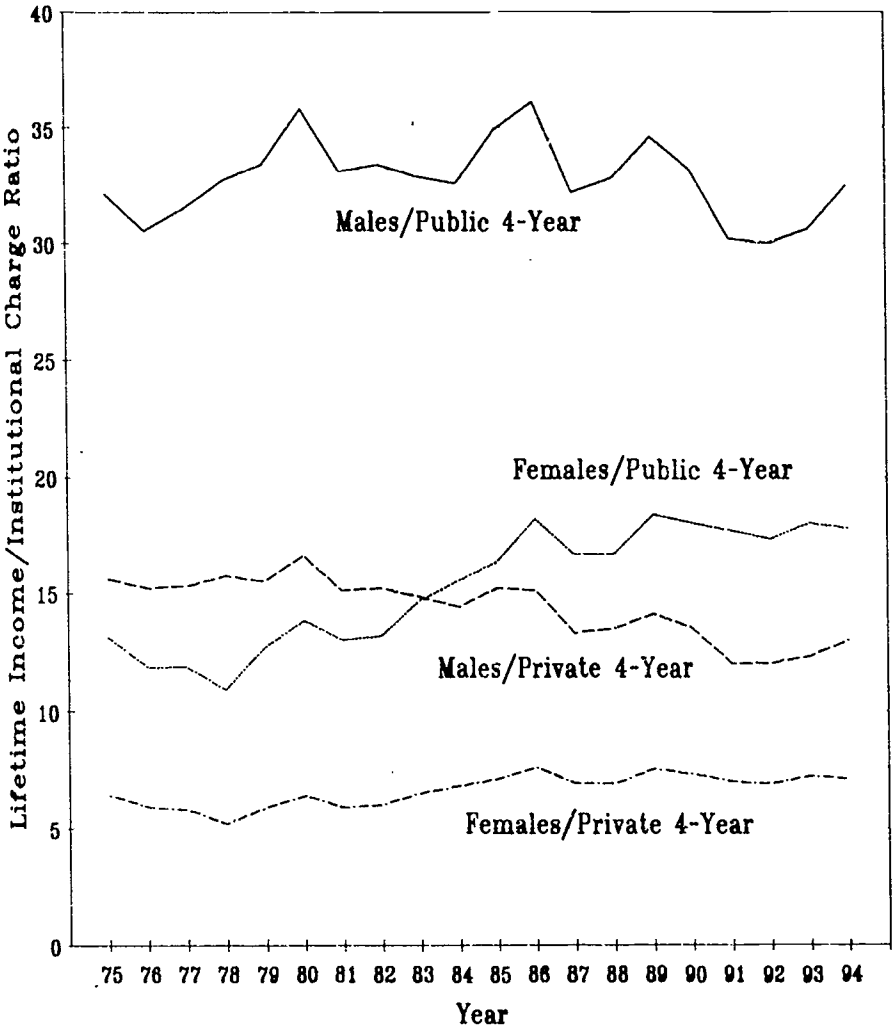
- How have these relationships changed over the last twenty years?
- Do the relationships between benefits and costs vary for the genders and major racial/ethnic groups?

Data and Analysis

This analysis is a simple benefit/cost calculation.

- The *benefit* is the lifetime income advantage enjoyed by a college graduate compared to the lifetime income of a high school graduate.
- The *cost* is the institutional charges incurred by the individual over the four years required to obtain the baccalaureate degree.

Lifetime Income/Institutional Charges Ratios by Gender and Institutional Control 1975 to 1994



- The *ratio* of lifetime income to four years of institutional charges is the goal of the analysis.

Our analyses examine lifetime earnings by gender and race/ethnicity because on average people from these backgrounds are paid differently in the labor market for many reasons not important here. Our analyses also control for public and private high education because of the large disparities in institutional charges--particularly tuition and fees--between public/subsidized and private/unsubsidized institutions. These analyses are made for each year from 1975 through 1994.

The sources of data are two. Income data by educational attainment, gender and race/ethnicity are collected by the Census Bureau in the Current Population Survey, and published in *Current Population Reports*, Series P20. The most recent published data appear in:

Kominski, R., and Adams, A. (May

1994.) *Educational Attainment in the United States: March 1993 and 1992.* Current Population Reports, P20-476. Washington, DC: U.S. Government Printing Office.

Data on institutional charges are collected by the National Center for Education Statistics in the annual Integrated Postsecondary Education Data System (IPEDS) and other institutional surveys. The results are published in the *Digest of Education Statistics*. Institutional charges include tuition, fees, room and board.

Snyder, T. D., and Hoffman, C. M. (October 1995.) *Digest of Education Statistics 1995.* National Center for Education Statistics, NCES 95-029. Washington, DC: U.S. Government Printing Office.

Gender

Because of the very large differences in income between men and women, even after controlling for educational attainment, we calculate the ratios of lifetime income to institutional charges separately for men and women. The results are shown in both the table on this page and the chart on page 9.

For men graduating from an average cost public 4-year college or university, the lifetime income advantage over high school graduates was $827,240 in 1994. Their costs of four years of college was $63,616. Therefore each dollar spent on gaining the degree from a public 4-year institution returned $32.50 in increased lifetime income to men in 1994, or the ratio was 32.5. The ratio is considerable lower for males graduating from an average cost private institution. In 1994 it was 13.

Between 1975 and 1986 this ratio increased from about 31 to a peak of

Lifetime Income to Institutional Charges Ratios by Gender and Institutional Control 1975 to 1994

	<----------Income---------->				<--Pub Cost-->		Incm/	<--Priv Cost-->		Incm/
Year	Bachlr Degree	HS Grad	Diff	Lifetim	Inst Chrgs	Degree Cost	Cost Ratio	Inst Chrgs	Degree Cost	Cost Ratio
	A	B	C=A-B	D=Cx40	E	F=Ex4	G=D/F	H	I=Hx4	J=D/I
Males										
1994	$44,388	$23,707	$20,681	$827,240	$6,365	$25,460	32.5	$15,904	$63,616	13.0
1993	41,402	22,966	18,436	737,440	6,020	24,080	30.6	15,009	60,036	12.3
1992	40,039	22,978	17,061	682,440	5,695	22,780	30.0	14,273	57,092	12.0
1991	38,484	22,663	15,821	632,840	5,243	20,972	30.2	13,237	52,948	12.0
1990	38,901	22,378	16,523	660,920	4,975	19,900	33.2	12,284	49,136	13.5
1989	38,692	22,508	16,184	647,360	4,678	18,712	34.6	11,474	45,896	14.1
1988	35,906	21,481	14,425	577,000	4,403	17,612	32.8	10,659	42,636	13.5
1987	33,677	20,364	13,313	532,520	4,138	16,552	32.2	10,039	40,156	13.3
1986	33,376	19,453	13,923	556,920	3,859	15,436	36.1	9,228	36,912	15.1
1985	31,433	18,575	12,858	514,320	3,682	14,728	34.9	8,451	33,804	15.2
1984	29,203	18,016	11,187	447,480	3,433	13,732	32.6	7,759	31,036	14.4
1983	27,239	16,728	10,511	420,440	3,196	12,784	32.9	7,126	28,504	14.8
1982	25,758	16,160	9,598	383,920	2,871	11,484	33.4	6,330	25,320	15.2
1981	24,353	15,900	8,453	338,120	2,550	10,200	33.1	5,594	22,376	15.1
1980	23,340	15,002	8,338	333,520	2,327	9,308	35.8	5,013	20,052	16.6
1979	21,482	14,317	7,165	286,600	2,145	8,580	33.4	4,609	18,436	15.5
1978	19,861	13,188	6,673	266,920	2,038	8,152	32.7	4,240	16,960	15.7
1977	18,187	12,092	6,095	243,800	1,935	7,740	31.5	3,977	15,908	15.3
1976	16,714	11,189	5,525	221,000	1,811	7,244	30.5	3,625	14,500	15.2
1975	15,758	10,475	5,283	211,320	1,648	6,592	32.1	3,379	13,516	15.6
Females										
1994	24,686	13,326	11,360	454,400	6,365	25,460	17.8	15,904	63,616	7.1
1993	23,679	12,854	10,825	433,000	6,020	24,080	18.0	15,009	60,036	7.2
1992	23,991	14,128	9,863	394,520	5,695	22,780	17.3	14,273	57,092	6.9
1991	22,802	13,523	9,279	371,160	5,243	20,972	17.7	13,237	52,948	7.0
1990	21,933	12,986	8,947	357,880	4,975	19,900	18.0	12,284	49,136	7.3
1989	21,089	12,468	8,621	344,840	4,678	18,712	18.4	11,474	45,896	7.5
1988	19,216	11,857	7,359	294,360	4,403	17,612	16.7	10,659	42,636	6.9
1987	18,217	11,309	6,908	276,320	4,138	16,552	16.7	10,039	40,156	6.9
1986	17,623	10,606	7,017	280,680	3,859	15,436	18.2	9,228	36,912	7.6
1985	16,114	10,115	5,999	239,960	3,682	14,728	16.3	8,451	33,804	7.1
1984	14,865	9,561	5,304	212,160	3,433	13,732	15.5	7,759	31,036	6.8
1983	13,808	9,147	4,661	186,440	3,196	12,784	14.6	7,126	28,504	6.5
1982	12,511	8,715	3,796	151,840	2,871	11,484	13.2	6,330	25,320	6.0
1981	11,384	8,063	3,321	132,840	2,550	10,200	13.0	5,594	22,376	5.9
1980	10,628	7,423	3,205	128,200	2,327	9,308	13.8	5,013	20,052	6.4
1979	9,474	6,741	2,733	109,320	2,145	8,580	12.7	4,609	18,436	5.9
1978	8,408	6,192	2,216	88,640	2,038	8,152	10.9	4,240	16,960	5.2
1977	7,923	5,624	2,299	91,960	1,935	7,740	11.9	3,977	15,908	5.8
1976	7,383	5,240	2,143	85,720	1,811	7,244	11.8	3,625	14,500	5.9
1975	6,963	4,802	2,161	86,440	1,648	6,592	13.1	3,379	13,516	6.4

1-Census Bureau, Current Population Survey, P20-476, pp. 99-101.
2-National Center for Education Statistics, 1995 Digest, pp. 317-318.

36 for public institution graduates, and has since declined somewhat. For graduates of private institutions the peak occurred in 1980 at 16.6, and has since dropped to 13.0 in 1994.

A somewhat different picture emerges for women. The lifetime income/institutional charges ratio is lower, because women earn substantially less than men at any level of educational attainment. In 1994 the ratio for women graduates of public institutions was 17.8 and of private institutions was 7.1.

However, unlike for men, these income/cost ratios clearly improved for women during the last twenty years. The improvement occurred mainly between 1978 and 1986, but persists at these mid-1980s levels through 1994. For men from both public and private institutions these ratios have declined.

Race/Ethnicity

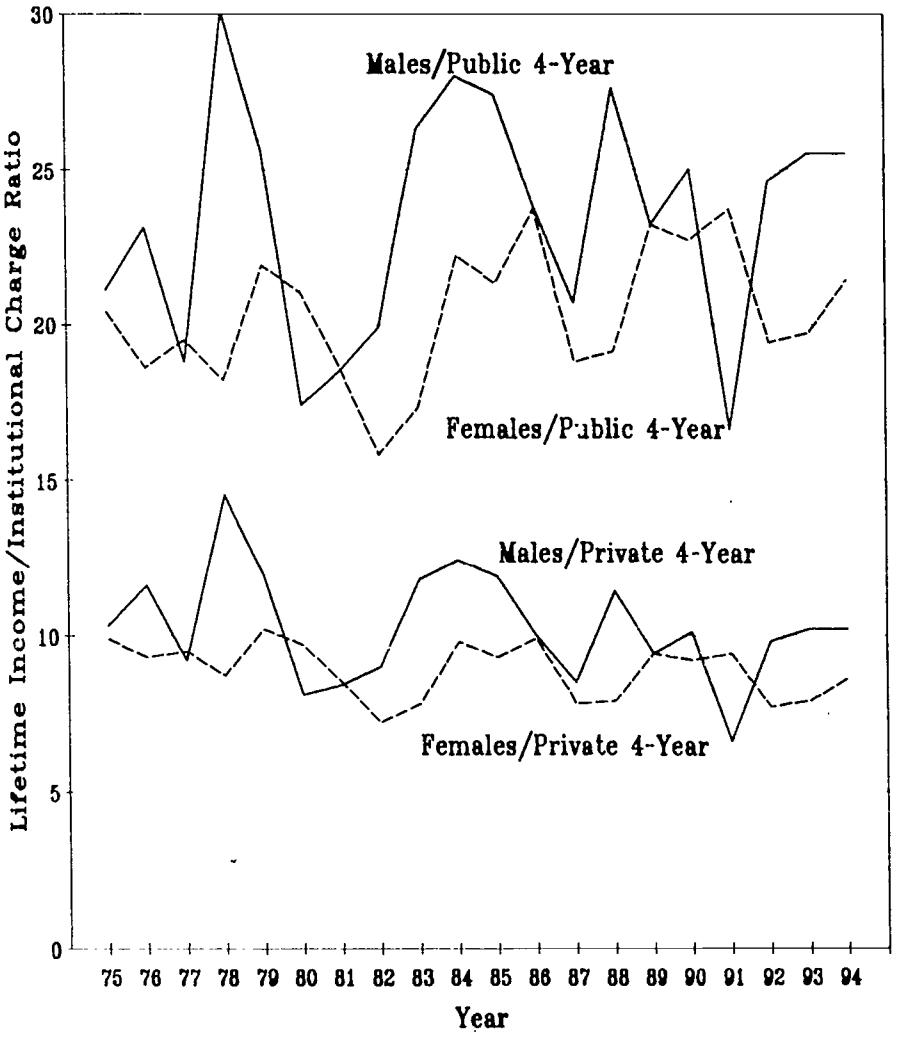
The income data reported by the Census Bureau are available for racial/ethnic groups--white, black, Hispanic--by gender. We have charted a summary of these data on page 8. Due to space limitations, we will illustrate the data here only for blacks. Copies of the three spreadsheets for whites, blacks and Hispanics (similar to the one on page 10) are available to subscribers on request.

The lifetime income to institutional charges ratios for black males and females from public and private institutions are shown in the chart on this page. The spikiness of the charts is due, at least in part, to sampling. Roughly speaking for the last three years black males with bachelor's degrees will earn back about $25 in increased income over high school graduates for every dollar in institutional charges in public colleges and universities they incur. The return is somewhat lower--about $23--for black females. These returns appear to be increasing over the last twenty years. From private institutions the returns are about $10 in increased income per dollar of institutional charges for males, and $9 for females. Over the last twenty years these returns have been stable.

For Hispanics (not shown) very large differences in the lifetime income/institutional cost ratios between genders are apparent. Hispanic men appear to benefit greatly from college, earning back about $32 in increased lifetime income per dollar spent in public institutions, and Hispanic women earn back substantially less, about $14. This gender gap is greatest among Hispanics and least among blacks.

In fact these data and others reported previously in OPPORTUNITY suggest that Hispanic women receive the smallest gains from college of any gender and racial/ethnic group. While the economic gains from college are huge for males, they drop off with

Lifetime Income/Institutional Charges Ratios for Blacks by Gender and Institutional Control 1975 to 1994



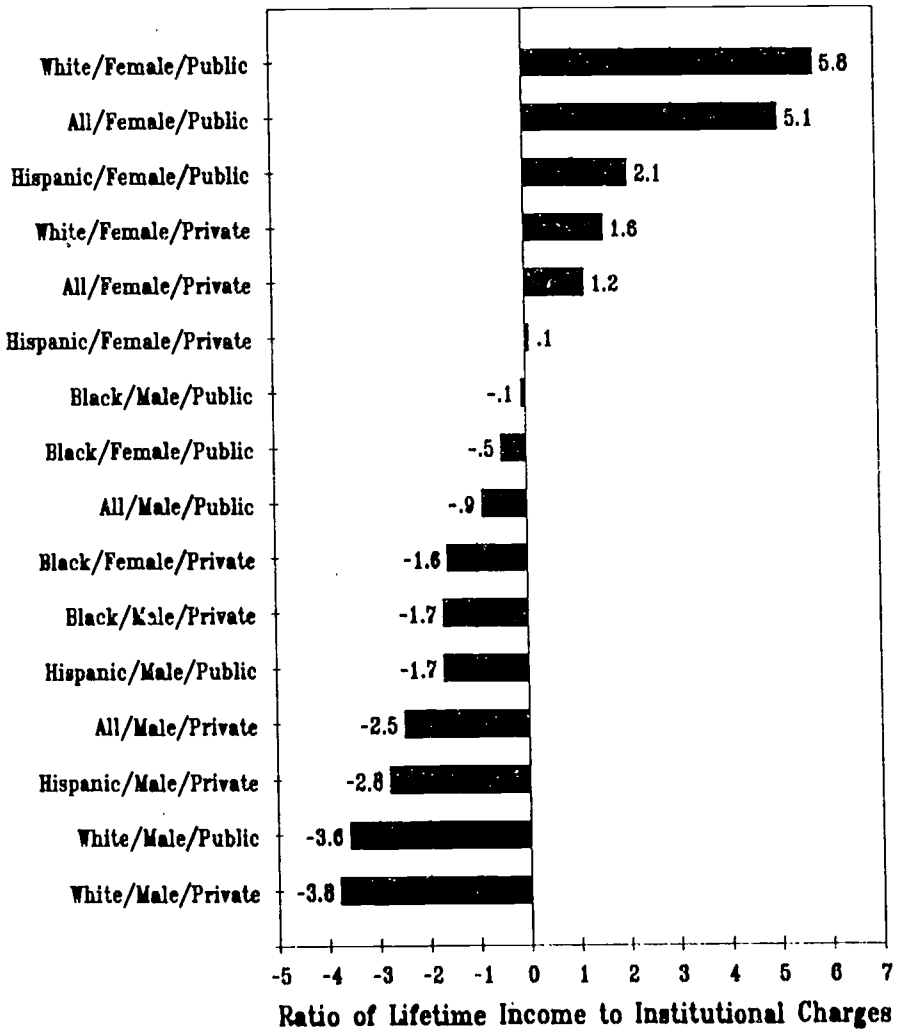
gender, race/ethnicity other than white, and from private compared to public colleges.

A more complete analysis that included data on incomes of private college graduates compared to public college graduates and the cost-reducing effects of financial aid in the forms of grants or scholarships to students from low income backgrounds could alter these findings somewhat. However, in this form the differential labor market treatment of college graduates from different gender and racial/ethnic backgrounds implies wide variations in private rates of return on higher education investments made by individuals to persons from different racial/ethnic and gender backgrounds graduating from differently priced colleges.

Summary and Conclusions

This analysis finds large lifetime income gains for college graduates over high school graduates relative to institutional charges. This finding applies to both genders, all racial/ethnic groups, and graduates from both public and private colleges.

Change in Lifetime Income/Institutional Charges Ratios by Race/Ethnicity, Gender and Institutional Control between 1979 and 1994



These gains vary substantially, however, for different groups.

- Men gain more than women, due to income differences between men and women in the labor force.
- Graduates of public colleges gain substantially more than do graduates from private colleges due to the very large differences in the price of public/subsidized higher education compared to private/ unsubsidized colleges.
- Whites gain somewhat more than do blacks or Hispanics with their college degrees. This may be due to fields of study and occupations chosen.

The disparity in the private returns to a baccalaureate education suggest attempts to equalize higher educational opportunities cannot be met only through financial aid. The labor market into which college graduates go to seek the benefits from their higher education investment treat women differently than men, and minorities somewhat differently than whites. Private rate-of-return estimates will find women and minorities getting lower rates of return on their higher education investments than white males where the income/ cost ratios calculated here are highest.

Since 1979 when the cost-shift from taxpayers to students began, our income/cost ratios have still managed to improve for some groups. Notably for women, the increase in lifetime income gain from college over high school has been faster than increases in institutional charges. This helps explain the large gain in collegiate enrollments and graduates among women, as well as the problem of male enrollments in higher education.

Finally, when college costs are compared to lifetime income gains and not family resources, the benefits of the investment are clear and compelling. Attending college is not really a choice.

Choose Reform, Not Declining Quality
A Citizens League Policy Statement

In 1970 Professors Lee Hansen and Burton Weisbrod of the University of Wisconsin proposed that Wisconsin restructure public finance of higher education. Instead of appropriating state resources to public institutions, Hansen and Weisbrod proposed that Wisconsin target its higher education funding on financially needy students. Their proposal was called the Higher Education Opportunity Program. Their proposal was not adopted, although many states have moved gradually in this direction.

In August of 1995, the Citizens League of Minnesota proposed taking state funding for Minnesota higher education in the direction proposed by Hansen and Weisbrod. The Citizens League is a citizen-based organization that examines public policy choices, makes recommendations and advocates their adoption. This proposal is a part of a larger examination of state revenues and funding for Minnesota. The complete report under the title to this article is available from the Citizens League at (612) 338-0791. A valuable follow-up report titled "An Agenda for Reform: Competition, Community, Concentration" (November 1995) is available from Minnesota Planning at (612) 296-3985.

INTRODUCTION

Minnesota's current practice of appropriating 90 percent of its general fund monies for higher education to the two large systems fails to reward innovation and efficiencies in delivery of higher education. The following recommendations propose a radical change in Minnesota's approach to funding higher education. In this scheme, 60 percent of appropriated funds would go to students, who would be free to spend those funds at the Minnesota campuses the students believe provide the highest quality education. Increased emphasis would be placed on performance-based funding for the University of Minnesota and the Minnesota State Colleges and Universities System (MnSCU). Support for the state's long-term economic growth would be enhanced through increased higher education opportunities for more Minnesotans and through direct appropriations to support research in sectors vital to the state's economy.

CURRENT AND FUTURE TRENDS

- State general fund support for higher education between 1987 and the 1996-97 biennium has declined as a percentage of general fund expenditures from 15.8 percent to 11.8 percent.
- Between 1985 and 1995, tuition and fee increases exceeded increases in Minnesota per capita income adjusted for inflation. Constant-dollar per capita income grew by 13 percent, while constant dollar tuition and fee increases ranged from 17 percent in the community colleges to 55 percent in private colleges.
- Approximately 90 percent of state general fund appropriations for higher education are made to the University of Minnesota and MnSCU systems. Approximately 10 percent is appropriated for student financial aid.
- In 1994, the Minneapolis/St. Paul metropolitan area accounted for 46 percent of high school graduates. By the year 2011, the Twin Cities share will increase to 56 percent. The total number of statewide high school graduates will increase from approximately 52,000 in 1994 to 68,000 in 2008.
- Nonwhite 15-24 year olds accounted for 7.5 percent of Minnesota's population in 1990, but the share is projected to increase to 19 percent by 2020, with the most rapid increases expected in the metropolitan area.
- According to the 1994 State Survey, 70 percent of Minnesota adults plan to pursue some type of learning opportunity in the next three years, compared with 43 percent of Minnesotans who said they used learning opportunities in the preceding year.
- There is a substantial geographic mismatch between post-secondary education opportunities and concentrations of population. Fifty-three of the state's 66 public post-secondary campuses are located outside the metropolitan area. (All data above: Minnesota Higher Education Coordination Board.)

THE PROBLEM: WHY INCREMENTAL CHANGE WON'T BE ENOUGH

These trends—declining per-student appropriations, rising tuition, and growth in the population of college-age persons—have disturbing implications for the state. Population growth implies increased spending just to keep per-student investment static. Budget pressures in the institutions imply continued, or worsening, pressure to raise tuitions.

At the same time, the population of people of color as a percentage of the college-age population is rising rapidly. High school dropout rates for students of color are appalling. People of color, who are disproportionately poor and low-income, face significant financial barriers to attendance—another pressure for increased spending, not reduced. Once enrolled, students of color are more likely to drop out for a wide variety of reasons, including financial reasons; only 31 percent of American Indian students, and 39 percent of African American students, were still enrolled full-time four years after entering four-year institutions (compared with 55 percent of Asian students and 54 percent of white students).

These population trends and the systems' poor performance with students of color and low-income students pose a human capital disaster for the state, aside from raising other important issues of equity and justice.

The political economy of the higher education system points to ever rising costs of operation—cost creep, maybe even galloping cost creep. But the political economy of state and national governments points to static or falling public spending for higher education.

Thus any list of "salami-tactic" cuts—close campuses, freeze salaries, or drop

departments—would be non-strategic and pointless. Instead, recommendations must seek structural change in the political economy of the higher education system. Reforms are needed to recast incentives, priorities and accountabilities to spur self-generated cost control and quality improvement.

FIVE PRINCIPLES FOR BETTER VALUE: SUMMARY RECOMMENDATIONS

Principle 1. Target public subsidies directly to people who are financially needy. Under this proposal, need-based financial aid for low and middle income students would be nearly tripled, thus providing access to higher education opportunities for more Minnesotans.

Principle 2. Use competition as a tool to align institutional self-interest with the public interest. The scheme proposed here would place 60 percent of the state education funds in the hands of students and would force Minnesota higher education institutions to compete by providing high quality education services that meet the needs of consumers. In addition, efficiency and innovation would be fostered through competition to meet performance objectives within the two systems.

Principle 3. Allow prices of public services to reflect true costs, including the social costs of individual decisions. Tuitions would be allowed to rise to reflect instructional costs. These increases would be offset by the availability of increased state grants and lifetime learning grants appropriated to all Minnesota students.

Principle 4. Meet more public responsibilities through non-governmental communities in which people already have relationships with mutual obligation. The proposed system would include an extensive information, education and outreach effort, in partnership with communities that have the trust of low-income students and students of color.

Principle 5. Consider long-term economic growth to be one of the objectives of state spending. The renewed commitment to producing well-educated post secondary graduates to lifetime learning, and to funding necessary research will maintain and vitalize Minnesota's economy.

DISCUSSION

The 1996-97 biennial appropriations for higher education continued to be provider-driven, not consumer-driven. Approximately 90 percent of the $1.1 billion appropriated will go to the two large public systems to operate the state's 66 traditional campuses. Only 10 percent of the general fund appropriations will go to students for direct financial assistance. The legislature rejected a proposal to create an independent commission to evaluate the feasibility of closing inefficient, low quality or under-enrolled campuses in order to shift scarce resources to high quality institutions better able to meet future demand for higher education services, including the provision of more technology based post-secondary learning opportunities.

State appropriations, on a per-student basis in constant dollars, will actually decline in the coming biennium. The increasing demands for state spending on K-12 education, social services, and criminal justice have reduced the state spending commitment for higher education at a time when demand for post-secondary education opportunities is increasing. The result of this tend is that state government has adopted a *de facto* high tuition policy, most recently evidenced by the announcement of a 7.5 percent per year tuition increase at the University of Minnesota.

The Legislature has rejected the opportunity to support significant new technological initiatives in higher education in order to support traditional institutions and faculty. While appropriations were provided to continue to expand the Learning Network of Minnesota, the legislature rejected proposals to create an open learning institution and a consortium to develop alternate delivery methodologies.

To maintain higher education opportunities, particular for low- and middle-income students, increased resources must be made available *to students* through financial aid programs to meet the state's higher tuitions. Proposed changes in federal support for financial aid programs will increase the financial burdens on low and middle income students and will exacerbate the growing problem of inadequate access to post-secondary educational opportunities.

IMPLICATIONS OF FEDERAL CUTS

Higher education has already experienced reduced per-student appropriations for the 1996-97 biennium. Further growth in the budgets of other state programs— the likely response to expected federal reductions in those programs—would further erode state support for higher education, would adversely impact education quality, and could jeopardize the success of the merger that resulted in the formation of MnSCU.

The most immediate concern is the potential effect of proposed federal reductions in student financial aid programs. While it appears that there will be no reductions in Pell Grants, proposals to eliminate in-school interest subsidies for Stafford Loans would cost Minnesota students approximately $32 million per year (Minnesota Higher Education Coordinating Board). Such increased costs would act as a significant additional barrier to the pursuit of post-secondary education by low- and middle-income students.

The Minnesota Legislature should not automatically assume responsibility for the cost of budget reactions at the federal level. However, the Legislature should consider access to higher education to be one of its major policy imperatives. And ensuring access will be harder to do if federal support for financial aid is reduced.

THE 30-30-30-5-5 APPROACH: FUNDING LEARNING FOR STUDENTS

The central recommendation of this report is that, consistent with the "Five Principles for Better Value," the state appropriations process should shift from supporting existing public higher education *systems* to funding learning opportunities for *students*.

Action steps:

1. **Beginning with the 1998-99 biennial budget, the current general fund appropriations ratio of 90 percent to systems and 10 percent to financial**

aid should be replaced with a new system that provides a majority of the appropriated funds directly to students, who would be free to spend those funds at the Minnesota higher education campuses of their choice.

As an example of this new funding approach, a new 30-30-30-5-5 formula could be used to allocate general fund appropriations in the following way:

30 percent appropriations to systems. The state has a substantial public interest in maintaining a basic post-secondary educational infrastructure. Thirty percent of the state's total appropriation to higher education would be appropriated to the U of M and MnSCU for this purpose. A portion of this appropriation should be in the form of incentive funding tied to specific performance objectives.

30 percent "lifetime learning grants" to all Minnesota students. The state has a compelling interest in educating all of its residents. Thirty percent of state appropriations would be used to fund grants to be given to all Minnesota high school graduates and a adult learners. These learning grants would partially replace the taxpayer subsidies which are currently appropriated to the two systems. Each high school graduate could, for example, be given a grant worth $10,000, of which no more than $2,000 could be expended in any given year. The amount of the grant would follow the student to a particular post-secondary institution, either public, private or alternative. Thus, the dollars would follow the students to campuses that offer quality programs. A formula or methodology will need to be devised to make grants available to graduate students and adult learners.

30 percent need-based financial aid. These funds would provide substantially increased assistance to low income students expanded eligibility for lower-middle- and middle-income students, in two ways: (1) by increasing the share of the state's total appropriation that is provided in need-based aid; and (2) by adopting the changes in eligibility requirements recommended by the Doermann report on higher education financing. Those changes included raising the Living and Miscellaneous Expense Allowance from the current $4,115 to $5,500 and defining the student share at 40 percent (rather than the current 50 percent). Continued eligibility for financial aid would be contingent on the student's satisfactory performance.

5 percent research. The research provided primarily by the University of Minnesota has been vital to supporting Minnesota's economy. This research component should be separately identified and fully funded to assure that the research conducted by Minnesota's higher education institutions continues to remain a valuable economic development tool for the state.

5 percent new higher education initiatives and technologies. These monies would be available to fund new initiatives and new technologies in delivering higher education services. As examples, an open learning university could be created; development of new alternative learning technologies could be funded; collaborative programs among various institutions could be supported; new entrants into the higher education market could be funded; or information centers, either publicly or privately operated, could be established to provide students with information about higher education alternatives.

Under the current funding system, declining resources are allocated by the Board of Regents and the MnSCU Board among all of the existing campuses, thus assuring a slow but inexorable decline in the quality of education at all institutions. The 30-30-30-5-5 approach, by assuring that a majority of the funding ends up at campuses that are successful at attracting students, could result in the closing of inefficient, lower quality or under-enrolled institutions. The appropriations to create an open learning university could include the development of 50 to 75 technology learning centers around the state, offering post-secondary education programs through distance learning and technology-based education. This system would be modeled after the Maine system, and, while campuses would close, would actually increase public access to higher education opportunities.

2. The Legislature should require the Higher Education Service Office to develop and plan for communicating the new financing system to the public. This step is critical to ensure that citizens understand that Lifetime Learning Grants and substantially increased financial aid will be available to offset the tuition increases that will be the most immediately visible result of the change.

The State should implement the communication/information plan in partnership with communities, perhaps contracting out certain responsibilities to community organizations that serve low-income people and people of color.

OTHER LONG-TERM RECOMMENDATIONS

1. The state should establish incentives for students and their families to save more for higher education. For example, a Learning Savings Account could be established for each student, the earnings from which would be free from state tax. These savings accounts could match the Lifetime Learning Grants appropriated by the state. The existence of such a savings account for a student would not count against the student's eligibility for financial aid. Since the objective of the learning savings accounts would be to provide educational opportunities for Minnesota students, the proceeds could be used at any higher education institution, inside or outside of the state of Minnesota. As an alternative, parents could be allowed to purchase Series EE United States Savings Bonds with their income tax refunds exclusively to help finance higher education for their children.

2. A substantial portion of the funds appropriated to institutions should be distributed on the basis of performance on state policy goals. By putting 60 percent of total funding into the hands of students, our proposal builds in a process for prodding institutions to provide the outcomes that *individual students* seek. Another form of accountability is needed to track performance on those outcomes that pertain to the interests of the *state as a whole*.

Ultimately, Legislators and other policymakers must be able to answer the question: Is higher education delivering the outcomes that state seeks to "purchase"

through its legislative appropriation? To answer the question, policymakers must define what outcomes they expect the higher education system to produce. Then, the state will need a robust set of outcome measures that gauge the effectiveness of institutions in delivering the outcomes. It is important that the focus be on outcomes (for example, skill levels of students completing programs) and no on inputs (qualifications of entering students) or process measures (student-faculty ratios).

The sensitive task of composing and defining an initial set of outcome measures should be addressed soon. Such measures should be shaped by professional educators, but also by a broad spectrum of higher education users and anticipated users. Especially solicited for their views should be citizens from sectors with relatively few post-high school students in the past, but with increasing numbers expected in the future. Among such sections are communities of color, new immigrants, young adults from low-income families, older adults with needs and wants in "lifetime learning" and citizens without English as their native language or America as their mother culture.

Action step:

a. The Governor and Legislature should convene and staff a panel of such groups in the fall of 1995, to draft and propose higher education outcome measures to the Legislature.

3. **All of the principals in the higher education enterprise should be accountable for performing their respective responsibilities.** The governing boards should be empowered to govern the systems; administrators should have the authority to effectively operate campuses; and faculty members should be free to provide quality learning opportunities for students.

Action steps:

a. The Legislature should establish clear statements of policy and performance indicators in making appropriations to the systems, but should refrain from attempting to micro-manage system operations.

b. The MnSCU Board of Trustees, not the Department of Employee Relations, should be required to negotiate and approve all contracts with faculty.

c. All faculty contracts should be related to the performance indicators and policy purposes identified by the Legislature making the appropriations.

d. A system of merit increases should be reinstated to recognize individual and team excellence in delivering higher education services.

CONCLUSION

These recommendations, while controversial, would ultimately lead to improved learning opportunities for students and improve efficiencies and cost-effectiveness for Minnesota's higher education systems, which ultimately would enable the state to provide its residents with more and better higher education services at lower cost.